# **General Notes**

- 1. DO NOT SCALE THE DRAWINGS
- 2. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE PROCEEDING WITH THE WORK.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK SHOWN ON THESE DRAWINGS AND SPECIFICATIONS UNLESS SPECIFICALLY NOTED OTHERWISE.
- 4. ALL WORK, CONSTRUCTION AND MATERIALS SHALL COMPLY WITH ALL PROVISIONS OF THE BUILDING CODE AND WITH OTHER RULES, REGULATIONS AND ORDINANCES GOVERNING THE PLACE OF BUILDING. BUILDING CODE REQUIREMENTS TAKE PRECEDENCE OVER THE DRAWINGS, AND IT SHALL BE THE RESPONSIBILITY OF ANYONE SUPPLYING LABOR. MATERIALS, OR BOTH, TO BRING TO THE ATTENTION OF THE ARCHITECT, ANY DISCREPANCIES OR CONFLICTS BETWEEN THE REQUIREMENTS OF THE CODE AND THE
- 5. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SHOWN, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY REPRESENTATIVES OF THE ARCHITECT AND HIS ENGINEERS SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES REQUIRED FOR THE SAME. WHICH ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR ANY SUPPORT SERVICES PERFORMED BY THE ARCHITECT AND HIS ENGINEERS SHALL BE WHETHER OF MATERIAL OR WORK, AND WHETHER PERFORMED DURING OR AFTER COMPLETION OF CONSTRUCTION ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS, BUT THEY DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL
- 6. DISCREPANCIES IN THE DRAWINGS OR BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT. CORRECTED DRAWINGS OR INSTRUCTIONS SHALL BE ISSUED BY THE ARCHITECT PRIOR TO THE INSTALLATION OF ANY
- 7. ALL DIMENSIONS ARE TO FACE OF FINISH, UNLESS OTHERWISE NOTED.

CONSTRUCTION PROGRESS TO MAINTAIN THE CONTRACT SCHEDULE.

NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.

- 8. CONTRACTOR TO CHECK AND VERIFY SIZE AND LOCATION OF DUCTS, PLUMBING RUNS AND MECHANICAL EQUIPMENT WITH MECHANICAL AND PLUMBING CONTRACTORS BEFORE CONSTRUCTING WALLS, FLOORING, CEIINGS, CABINETS, EQUIPMENT BASES, ETC.
- 9. REFERENCE TO ANY DETAIL OR DRAWING IS FOR CONVENIENCE ONLY AND DOES NOT LIMIT THE APPLICATION OF SUCH DETAILS OR DRAWINGS.
- 10. THE CONTRACTOR SHALL OBTAIN AND MAINTAIN AT HIS EXPENSE, ALL NECESSARY PERMITS AND LICENSES FOR THE COMPLETION OF THIS JOB EXCEPT AS SPECIFICALLY
- 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL VERIFICATION AND COORDINATION WITH OTHER TRADES OR SUBCONTRACTORS AND THEIR WORK TO ENSURE COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUOUS CLEAN-UP OF THE SITE OF ALL DEBRIS WHETHER CREATED BY HIS WORK OR THE FAILURE OF THE SUBCONTRACTORS TO CLEAN UP AFTER THEIR WORK.

- 13. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE EXECUTION OF THIS WORK.
- 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK AND / OR EQUIPMENT SUPPLIED BY THE OWNER.
- 15. THE CONTRACTOR WARRANTS TO THE OWNER AND THE ARCHITECT THAT ALL MATERIALS AND EQUIPMENT FURNISHED WILL BE NEW UNLESS OTHERWISE SPECIFIED AND THAT ALL WORK WILL BE OF INDUSTRY STANDARD, GOOD QUALITY, FREE FROM FAULTS OR DEFECTS.
- MANUALS PRESENTING FULL DETAILS FOR CARE AND MAINTENANCE OF ALL SURFACE AND INSTALLER'S NAMES, ADDRESSES, PHONE NUMBERS, AND INSTRUCTIONS FOR INSTALLATION. START-UP, OPERATION, MAINTENANCE, PARTS LIST AND DATA SHEET.
- 17. THIS PROJECT SHALL COMPLY WITH THE LATEST APPROVED EDITION OF THE CBC, CEC, T-24-6 ENERGY CONSERVATION REG., CMC, CPC, ALL LOCAL AMENDMENTS, AND THE AMERICANS WITH DISABILITY ACT (A.D.A.).
- 18. PROVIDE FACILITIES FOR THE PHYSICALLY HANDICAPPED IN ACCORDANCE WITH C.A.C. TITLE 24 AND AS REQUIRED BY THE UNIFORM BUILDING CODE LATEST APPROVED EDITION.
- 19. A PROTECTIVE FENCE SHALL BE CONSTRUCTED AND MAINTAINED CONFORMING TO THE REQUIREMENTS OF THE BUILDING CODE.
- 20. MAINTAIN SANITARY TOILET FACILTIES DURING CONSTRUCTION AS REQUIRED BY
- 21. FOR INTERIOR FINISH MATERIALS AND COLORS REFER TO FINISH AND COLOR
- 22. EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT (ON BOTH LEAVES, WHERE PAIRS OF DOORS OCCUR). THE FLOOR LANDING AT EACH SIDE OF AN EXIT DOORWAY SHALL NOT BE MORE THAN 1/2" LOWER
- 23. EXIT DOORS. EXIT LIGHTS. AND FIRE EXTINGUISHER LOCATIONS SHALL NOT BE CONCEALED OR OBSTRUCTED BY ANY DECORATIVE MATERIAL
- 24. PROVIDE 2A-10BC RATED FIRE EXTINGUISHERS AT LOCATIONS REQUIRED BY THE FIRE
- 25. PROVIDE SAMPLES AND SUBMITTALS AS INDICATED FOR ALL FINISH MATERIALS TO BE USED IN THIS PROJECT.
- 26. FIRE STOPS ARE TO BE PROVIDED AT MAX. 10'-0" INTERVALS, BOTH VERTICAL AND HORIZONTAL, AT ALL WALL VOIDS & CAVITIES. SPACING TO BE MAX. 8'-0" INTERVALS, BOTH VERTICAL AND HORIZONTAL, AT COMBUSTIBLE FIRE RATED WALLS.
- 27. EXITWAYS ARE TO BE ILLUMINATED AT ALL TIMES HAVING A LIGHT INTENSITY OF NOT LESS THAN ONE FOOTCANDLE AT FLOOR LEVEL.
- 28. ALL FLUORESCENT FIXTURES WITH DOUBLE ENDED LAMPS SHALL BE EQUIPPED WITH DISCONNECT MEANS PER 410.73 (G) [CEC 2013].

# Accessibility Notes

1. Manually operated edge- or surface-mounted flush bolts and surface bolts are prohibited. When exit doors are used in pairs and approved automatic flush bolts are used, the door leaf having the automatic flush bolts shall have no doorknob or surface-mounted hardware. The unlatching of any leaf shall not require more than one operation. (1003.3.1.7)

2. Latching and locking doors that are hand activated and which are in a path of travel shall be operable with a single effort by lever type hardware, by panic bars, push-pull activating bars, or other hardware designed to provide passage without requiring the ability to grasp the opening hardware. (1133B.2.5.1)

4. When installed, exit doors shall be capable of opening so that the clear width of the exit is not less than 32". (1133B.1.1.1.1, Fig 11B-5B & 11B-33)

5. There shall be a level and clear floor or landing on each side of a door. The level area shall have a length in the direction of door swing of at least 60" and the length opposite the direction of door swing of 48" as measured at right angles to the plane of the door in the closed position. Where the plane of the doorway is offset or located in an alcove a distance more than 8 inches measured from the plane of the doorway to the face of the wall, the door shall be provided with 60" maneuvering clearance for front approach. (1133B.2.4.2, 1133B.2.5.3, Fig 11B-26, Fig 11B-33)

6. The width of the level area on the side to which the door swings shall extend 24" past the strike edge of the door for exterior doors and 18" past the strike edge for interior doors. Where the door is recessed or located in an alcove, the projection distance allowed to project into the required door strike clearance measured from the face of the wall to the face of the door is limited to 8". (1133B.2.4.3, 1133B.2.4.5, Fig

7. The floor or landing shall be not more than 1/2" lower than the threshold of the doorway. (1133B.2.4.1)

8. Maximum effort to operate exterior and interior doors shall not exceed 5 pounds, with such pull or push effort being applied at right angles to hinged doors and at the center plane of sliding or folding doors. Compensating devices or automatic door operators may be utilized to meet the above standards. When fire doors are required, the maximum effort to operate the door may be increased to the minimum allowable by the appropriate administrative authority, not to exceed 15 pounds. (1133B.2.5)

1. If carpet or carpet tile is used on a ground or floor surface, it shall be securely attached; have a firm cushion, pad or backing or no cushion or pad; and have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. The maximum pile height shall be 1/2". Exposed edges of carpet shall be fastened to floor surfaces and have trim along the entire length of the exposed edge. Carpet edge trim shall comply with Section 1124B.2. (1124B.3, Fig 11B-7B)

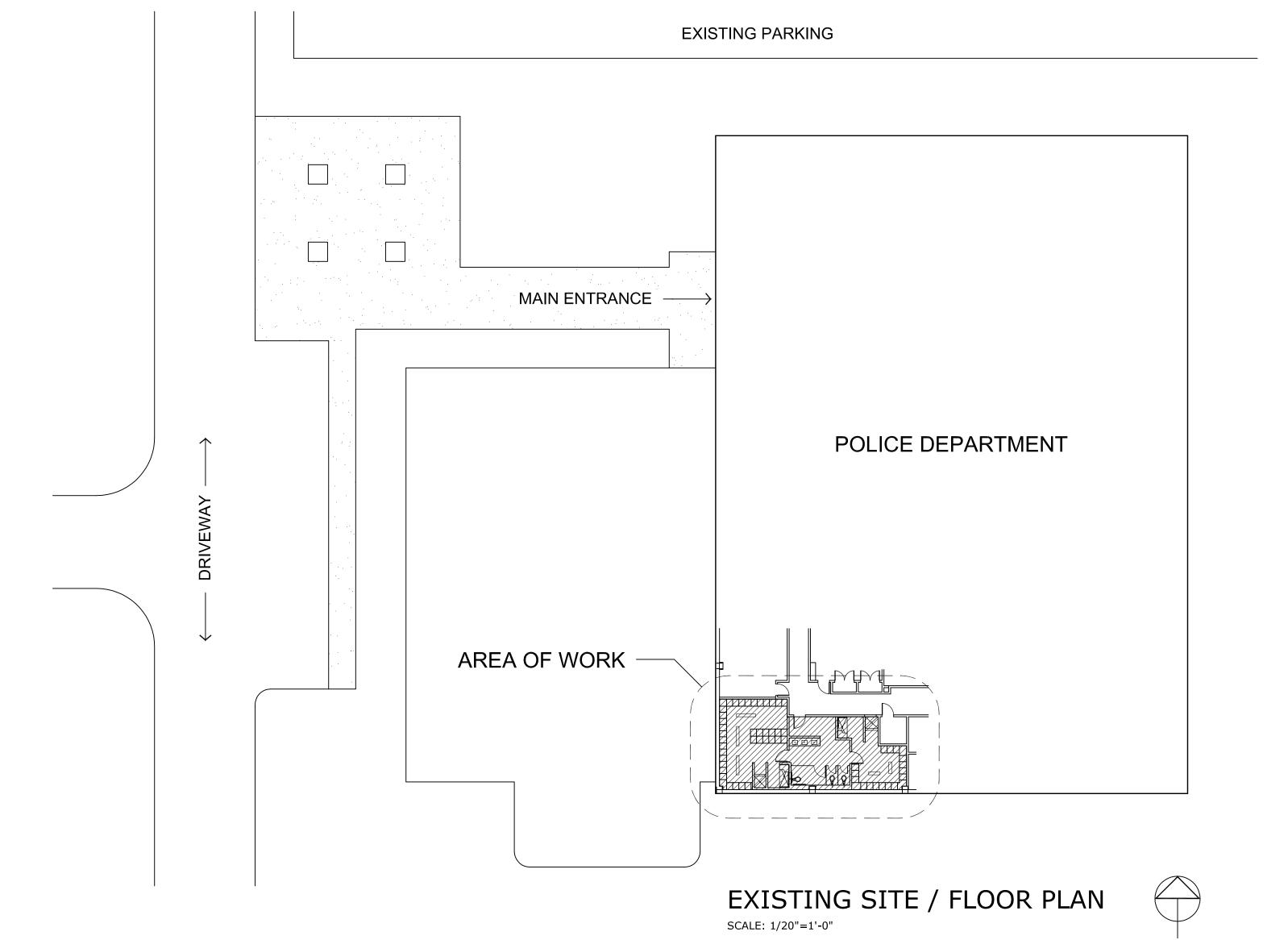
1. The center of junction box for elec trical and communication system receptacle outlets shall be installed at an accessible location meeting the clearances and reach range requirements of Section 1118B and not less than 15" above the floor or working platforms. (1117B.6.3 & 3-210-7(g.1))

2. The center of the grip of the operating handle of controls or switches intended to be used by the occupant of the room or area to control lighting and receptacle outlets, appliances, or cooling, heating, and ventilating equipment shall meet the requirements of Part 2, California Building Code (CBC), Section 1118B. Space Allowance and Reach Ranges, for persons with disabilities and shall not be more than 48" above the floor or working platform. (3-380-8(c))

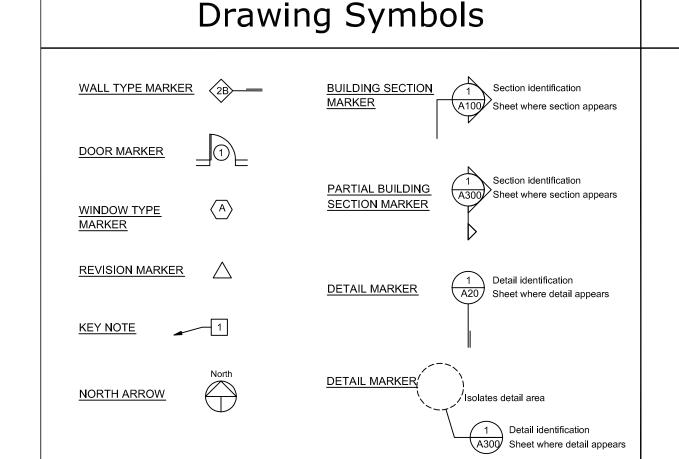
3. The center of fire alarm initiating devices (boxes) shall be located 48" above the level of the floor, working platform, ground surface, or sidewalk. (3-760-16)

# TORRANCE POLICE DEPARTMENT WOMEN'S RESTROOM / LOCKER ROOM RENOVATION

3300 TORRANCE BLVD., TORRANCE, CA 90503







OCCUPANCY GROUP: CONSTRUCTION TYPE: TYPE 1 FR / NON SPRINKLERED AREA OF RENOVATION PROJECT: BASEMENT -939 SF

Statistics

COORDINATOR: GENERAL SERVICES TEL: (310) 781.7101 FAX: (310) 781.7199 EMAIL: sminor@torranceca.gov WILLIAM LOYD JONES ARCHITECT 723 OCEAN FRONT WALK VENICE, CA 90091

TORRANCE, CALIFORNIA 90503

STEVE MINOR CITY OF TORRANCE

OWNER:

MECHANICAL:

ENGINEER:

ELECTRICAL:

TEL: (310) 392.3995 FAX: (310) 392.2857 EMAIL: williamjca@earthlink.net KHALIFEH & ASSOCIATES, INC. CONSULTING MECHANICAL ENGINEERS

13465 BEACH AVENUE MARINA DEL REY, CA 90292

TEL: (310) 305.1555 FAX: (310) 305.1550 CONTACT: JACK KHALIFEH EMAIL: jackkhalifeassociates.com

E ENGINEERS 1238 7TH STREET SANTA MONICA, CA 90401 TEL: (424) 272.6709 CONTACT: ERIC PERCIC EMAIL: epercic2@gmail.com

- TITLE SHEET, SITE PLAN, SHEET INDEX
- **EXISTING & DEMOLITION FLOOR PLANS**
- NEW FLOOR PLAN
- DEMOLITION & NEW REFLECTED CEILING PLAN DOOR & FINISH SCHEDULES & INTERIOR ELEVATIONS

# **PLU**MBING

- P0-1 GEN. NOTES, FIXTURE & MATERIAL SCHED., LEGEND & SHEET INDEX
- P1-1 PLUMBING DEMOLITION FLOOR PLAN
- P2-1 PLUMBING FLOOR PLAN P5-1 PLUMBING DETAILS

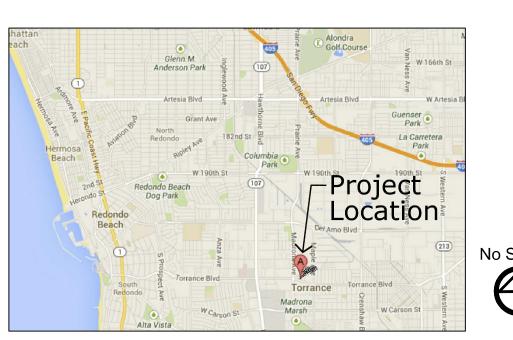
# MECHANICAL

- M0-1 GENERAL NOTES, LEGEND & INDEX
- M0-2 MECHANICAL SCHEDULES M0-3 MECHANICAL SCHEDULES
- M1-1 MECHANICAL DEMO PLANS
- M2-1 MECHANICAL FLOOR PLAN
- M5-1 MECHANICAL DETAILS M5-2 MECHANICAL DETAILS
- M5-3 MECHANICAL DETAILS M6-1 MECHANICAL CONTROLS

# ELECTRICAL

- E1.0 SYMBOLS & NOTES
- E2.0 POWER PLAN, PANEL SCHEDULE & PARTIAL SLD
- E3.0 LIGHTING PLAN & FIXTURE SCHEDULE
- E4.0 ELECTRICAL CONSTRUCTION SPECIFICATION
- E5.0 TITLE 24 INDOOR LIGHTING CALCULATIONS

- E5.1 TITLE 24 INDOOR LIGHTING CALCULATIONS E5.2 TITLE 24 - INDOOR LIGHTING CALCULATIONS





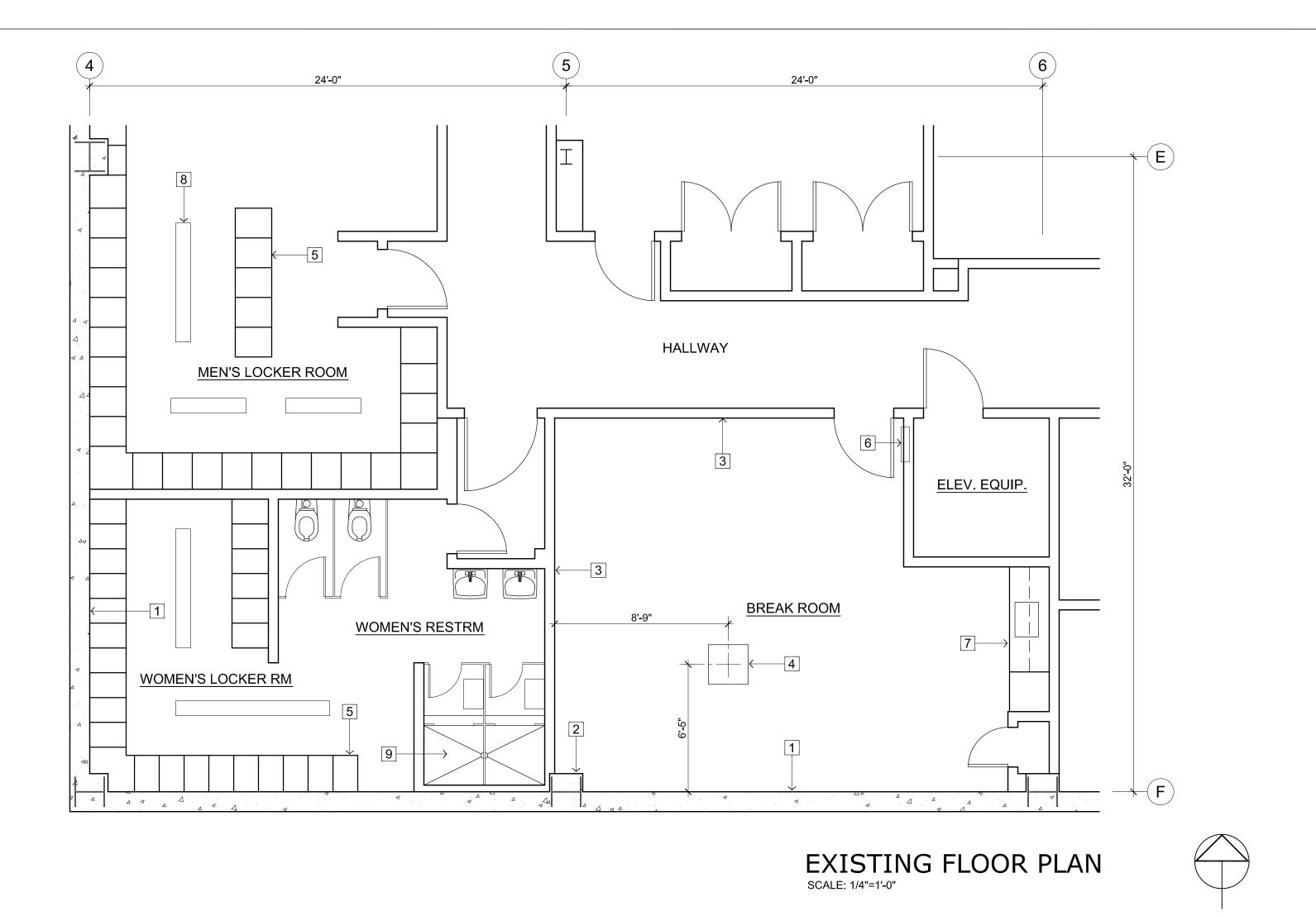


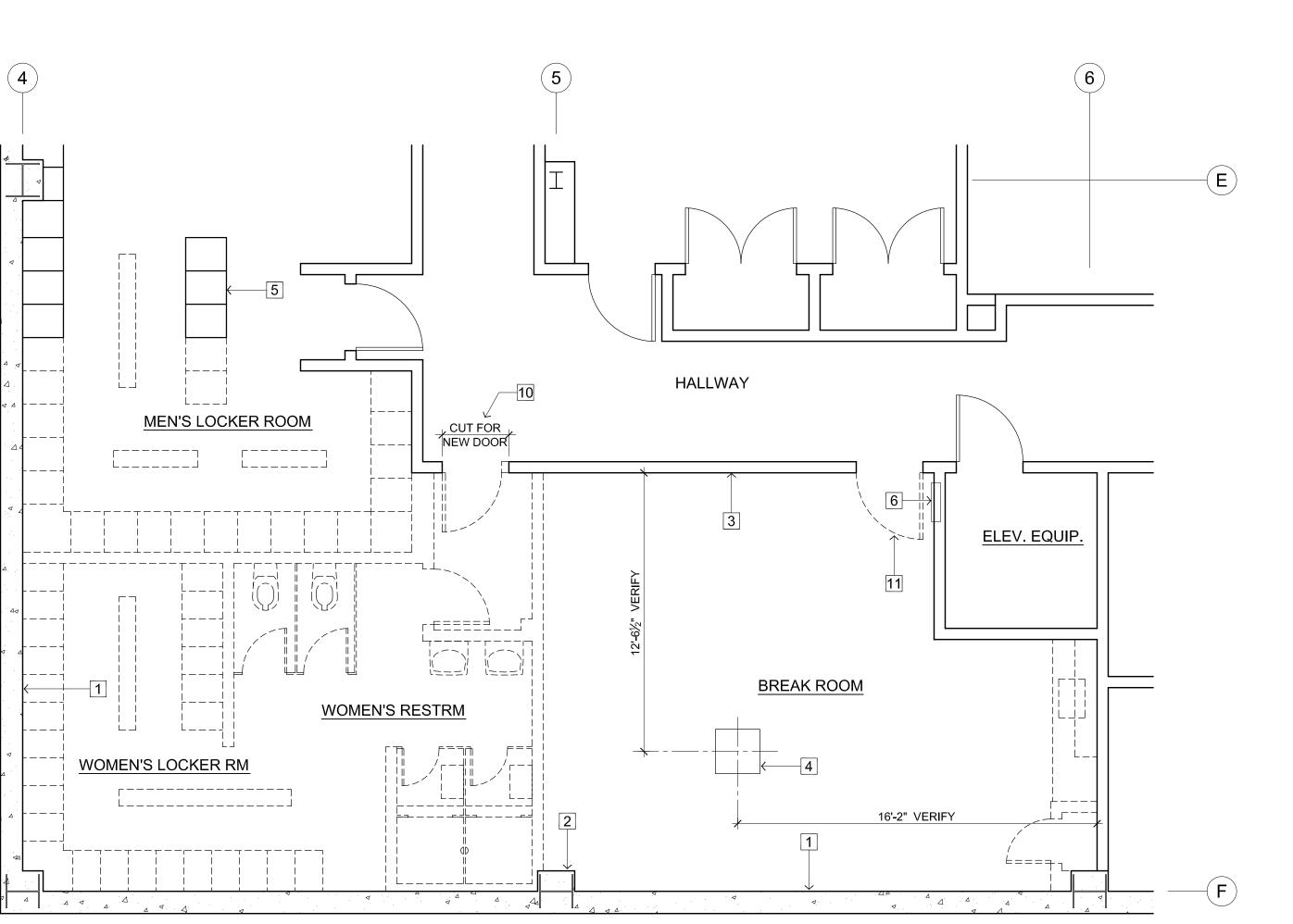
Date	26.SEP.14
Drawn	KC
Checked	WLJ
Scale	AS NOTED
Joh No	

**DEPARTMENT**OM RENOVATION TORRANCI WOMEN'S RESTRO

Issue CONSTRUCTION DOCUMENTS CITY REVIEW 1 APR 15 PLAN CHECK SUBMITTAL PLAN CHECK FINAL 20.MAY.15

REVISED PLAN CHECK FINAL





NOTES 1. TYP. EXISTING CONCRETE WALL. 2. TYP. EXISTING CONCRETE PILASTER. 3. TYP. EXISTING STUD WALL. 4. EXISTING 24"x24 FLOOR PLATE TO REMAIN. EXISTING LOCKERS. 6. EXISTING ELECTRICAL PANEL TO REMAIN. 7. EXISTING KITCHENETTE. 8. EXISITNG BENCH, TYP. 9. EXISTING SHOWERS. 10. REMOVE DOOR & FRAME; WIDEN OPENING FOR NEV 36" WIDE DOOR. 11. REMOVE DOOR & FRAME. E DEPARTMENT **DEMOLITION FLOOR PLANS** CE POLICE I TORRANCI WOMEN'S RESTRO Issue LEGEND CONSTRUCTION DOCUMENTS 16.JAN.15 CITY REVIEW 3.MAR.15 PLAN CHECK SUBMITTAL 1.APR.15 EXISTING CONC. WALL PLAN CHECK FINAL 20.MAY.15 6.OCT.15 REVISED PLAN CHECK FINAL EXISTING STUD WALL **EXISTING CONSTRUCTION** TO BE REMOVED \* SEE GENERAL DEMOLITION **NOTE BELOW** Copyright 2004 Date 26.SEP.14 Drawn Checked WLJ Scale AS NOTED GENERAL DEMOLITION / PATCHING NOTES

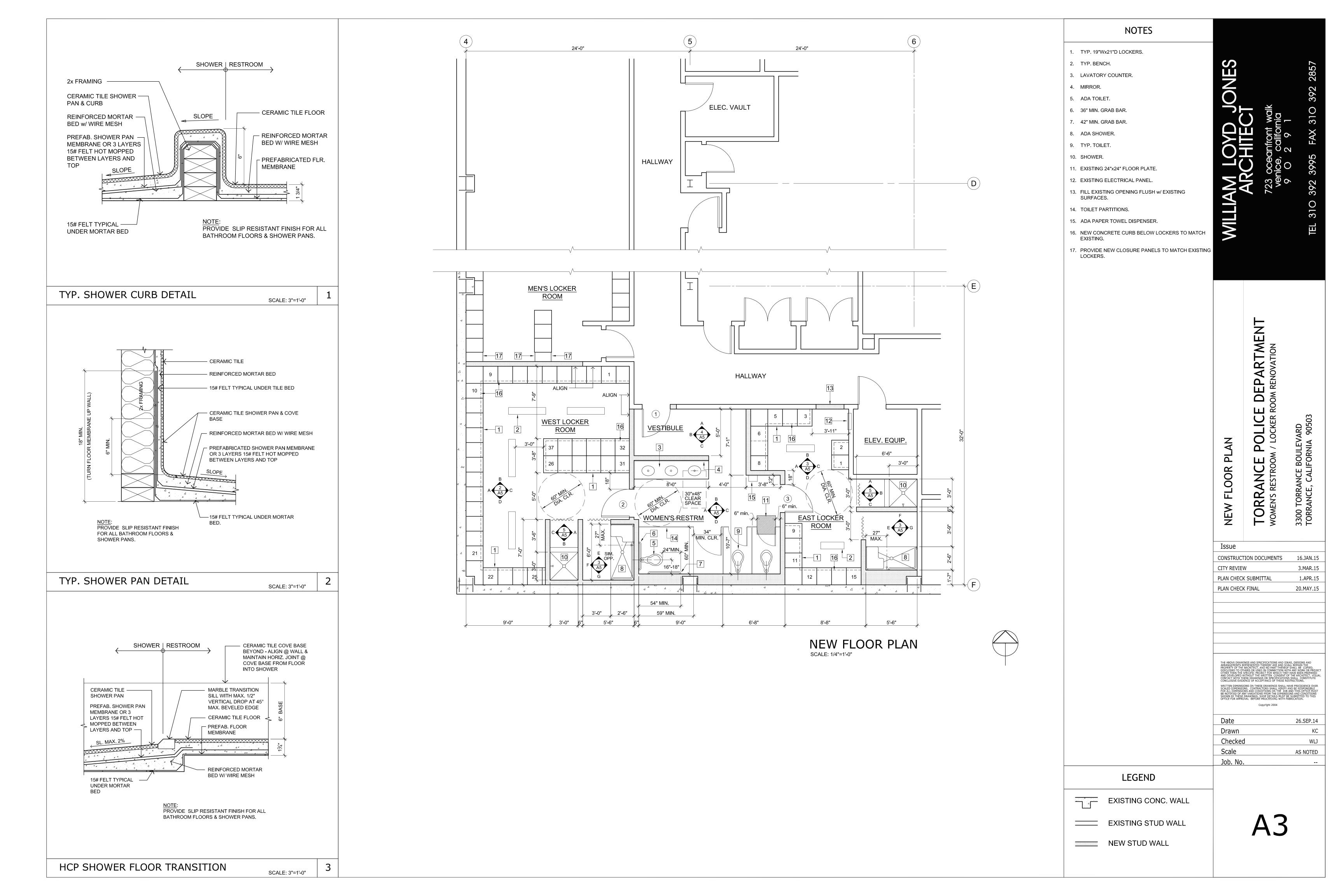
COMPLETELY REMOVE ALL WALLS, FIXTURES, FINISHES & ACCESSORIES AS SHOWN IN DEMOLITION AREA. REMOVE WIRING & PIPING AS REQUIRED FOR NEW

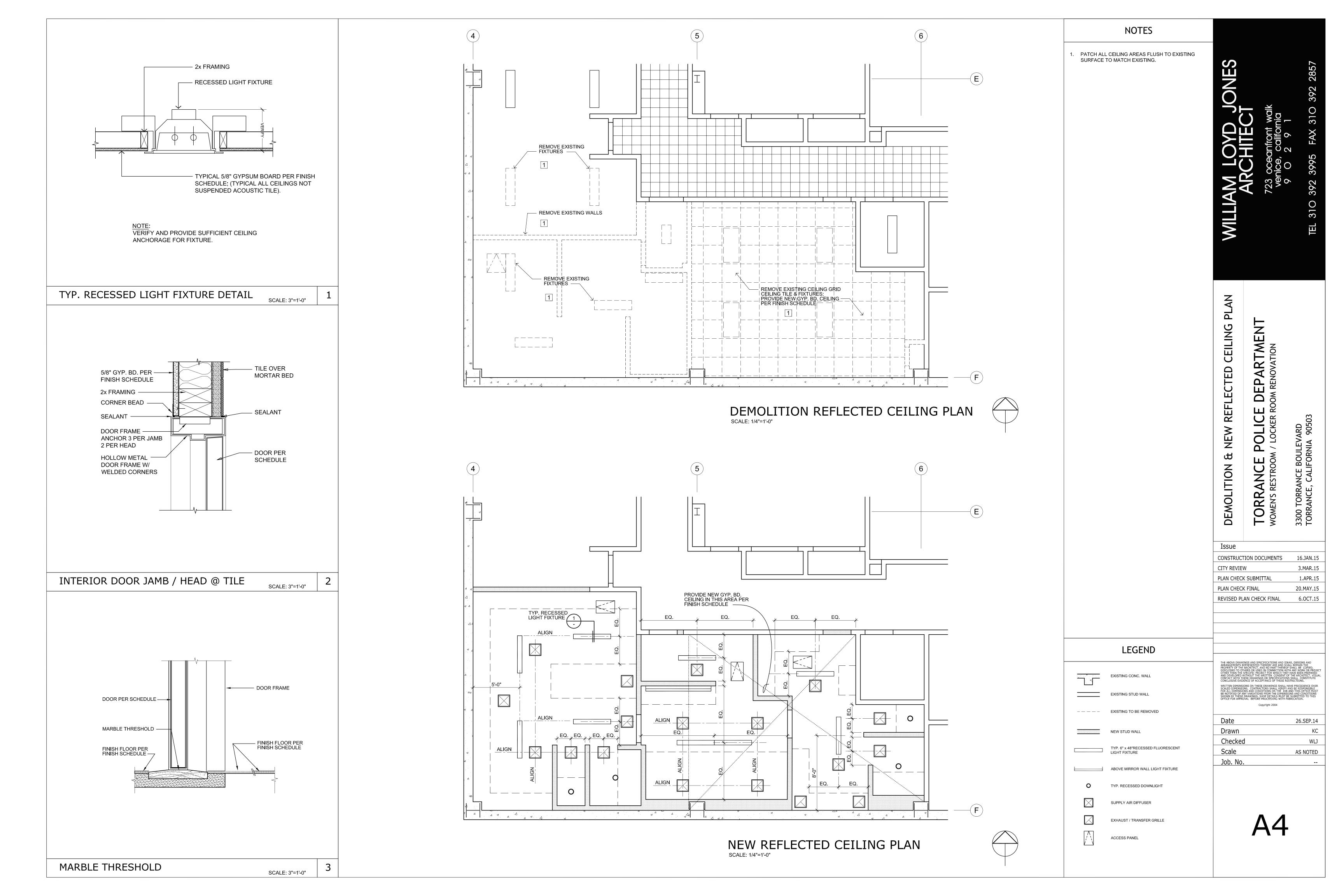
FULLY COMPACTED BASE WITH CONCRETE & REBAR TO MATCH EXISTING SPACING, SIZE & THICKNESS. DOWEL

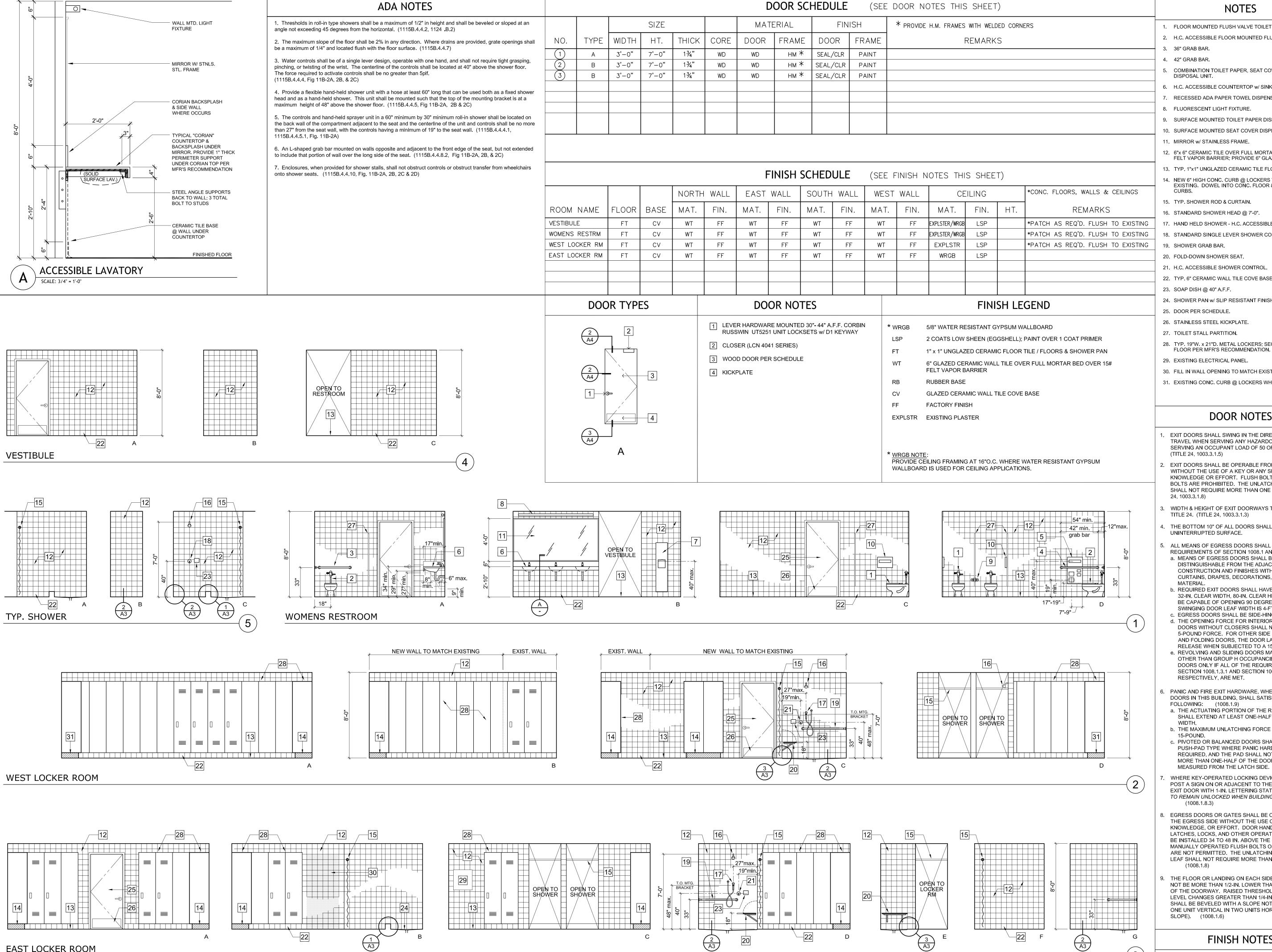
CONSTRUCTION. CAREFULLY SAWCUT & REMOVE PORTIONS OF CONCRETE FLOOR AS REQUIRED FOR REMOVAL OF PIPES UNDER FLOOR SLAB. SAWCUT & REMOVE CONCRETE LOCKER CURBS UNLESS USABLE FOR NEW LOCKERS. PATCH CONCRETE SLAB OVER

REBAR INTO EXISTING CONCRETE SLAB.

DEMOLITION FLOOR PLAN
SCALE: 1/4"=1'-0"







EAST LOCKER ROOM

# NOTES

- 1. FLOOR MOUNTED FLUSH VALVE TOILET
- 2. H.C. ACCESSIBLE FLOOR MOUNTED FLUSH VALVE TOILET.
- 3. 36" GRAB BAR.
- 4. 42" GRAB BAR.
- COMBINATION TOILET PAPER, SEAT COVER & NAPKIN DISPOSAL UNIT.
- 6. H.C. ACCESSIBLE COUNTERTOP w/ SINK.
- 7. RECESSED ADA PAPER TOWEL DISPENSER.
- 8. FLUORESCENT LIGHT FIXTURE.
- 9. SURFACE MOUNTED TOILET PAPER DISPENSER.
- 10. SURFACE MOUNTED SEAT COVER DISPENSER.
- 12. 6"x 6" CERAMIC TILE OVER FULL MORTAR BED OVER 15# FELT VAPOR BARRIER; PROVIDE 6" GLAZED COVE BASE.
- 13. TYP. 1"x1" UNGLAZED CERAMIC TILE FLOOR. 14. NEW 6" HIGH CONC. CURB @ LOCKERS TO MATCH EXISTING. DOWEL INTO CONC. FLOOR & EXISTING CONC
- 15. TYP. SHOWER ROD & CURTAIN.
- 17. HAND HELD SHOWER H.C. ACCESSIBLE.
- 18. STANDARD SINGLE LEVER SHOWER CONTROL.
- 19. SHOWER GRAB BAR.
- 20. FOLD-DOWN SHOWER SEAT.
- 21. H.C. ACCESSIBLE SHOWER CONTROL.
- 22. TYP. 6" CERAMIC WALL TILE COVE BASE.
- 23. SOAP DISH @ 40" A.F.F.
- 24. SHOWER PAN w/ SLIP RESISTANT FINISH.
- 26. STAINLESS STEEL KICKPLATE.
- 27. TOILET STALL PARTITION. 28. TYP. 19"W. x 21"D. METAL LOCKERS; SECURE TO WALL &
- 29. EXISTING ELECTRICAL PANEL.
- 30. FILL IN WALL OPENING TO MATCH EXISTING.
- 31. EXISTING CONC. CURB @ LOCKERS WHERE OCCURS.

# DOOR NOTES

- EXIT DOORS SHALL SWING IN THE DIRECTION OF EXIT TRAVEL WHEN SERVING ANY HAZARDOUS AREA OR WHEN SERVING AN OCCUPANT LOAD OF 50 OR MORE (TITLE 24, 1003.3.1.5)
- EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. FLUSH BOLTS OR SURFACE BOLTS ARE PROHIBITED. THE UNLATCHING OF ANY LEAF SHALL NOT REQUIRE MORE THAN ONE OPERATION. (TITLE 24, 1003.3.1.8)
- WIDTH & HEIGHT OF EXIT DOORWAYS TO COMPLY WITH TITLE 24. (TITLE 24, 1003.3.1.3)
- THE BOTTOM 10" OF ALL DOORS SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE.
- ALL MEANS OF EGRESS DOORS SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 1008.1 AND SECTION 1018.2. a. MEANS OF EGRESS DOORS SHALL BE READILY DISTINGUISHABLE FROM THE ADJACENT CONSTRUCTION AND FINISHES WITH NO MIRRORS, CURTAINS, DRAPES, DECORATIONS, OR SIMILAR
- b. REQUIRED EXIT DOORS SHALL HAVE NOT LESS THAN 32-IN. CLEAR WIDTH, 80-IN. CLEAR HEIGHT, AND SHALL BE CAPABLE OF OPENING 90 DEGREES. THE MAXIMUM SWINGING DOOR LEAF WIDTH IS 4-FT. NOMINAL.
- c. EGRESS DOORS SHALL BE SIDE-HINGED SWINGING. d. THE OPENING FORCE FOR INTERIOR SIDE-SWINGING DOORS WITHOUT CLOSERS SHALL NOT EXCEED A 5-POUND FORCE. FOR OTHER SIDE SWINGING, SLIDING AND FOLDING DOORS, THE DOOR LATCH SHALL
- RELEASE WHEN SUBJECTED TO A 15-POUND FORCE e. REVOLVING AND SLIDING DOORS MAY BE USED IN OTHER THAN GROUP H OCCUPANCIES AS EGRESS DOORS ONLY IF ALL OF THE REQUIREMENTS OF SECTION 1008.1.3.1 AND SECTION 1008.1.3.3, RESPECTIVELY, ARE MET.
- PANIC AND FIRE EXIT HARDWARE, WHERE INSTALLED ON DOORS IN THIS BUILDING, SHALL SATISFY THE FOLLOWING: (1008.1.9) a. THE ACTUATING PORTION OF THE RELEASING DEVICE
- SHALL EXTEND AT LEAST ONE-HALF OF THE DOOR LEAF b. THE MAXIMUM UNLATCHING FORCE DOES NOT EXCEED
- 15-POUND. c. PIVOTED OR BALANCED DOORS SHALL BE OF THE PUSH-PAD TYPE WHERE PANIC HARDWARE IS REQUIRED, AND THE PAD SHALL NOT EXTEND ACROSS MORE THAN ONE-HALF OF THE DOOR WIDTH, MEASURED FROM THE LATCH SIDE.
- WHERE KEY-OPERATED LOCKING DEVICES ARE USED, POST A SIGN ON OR ADJACENT TO THE REQUIRED MAIN EXIT DOOR WITH 1-IN. LETTERING STATING: "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED."
- EGRESS DOORS OR GATES SHALL BE OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE, OR EFFORT. DOOR HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES SHALL BE INSTALLED 34 TO 48 IN. ABOVE THE FINISHED FLOOR. MANUALLY OPERATED FLUSH BOLTS OR SURFACE BOLTS ARE NOT PERMITTED. THE UNLATCHING OF ANY DOOR OR LEAF SHALL NOT REQUIRE MORE THAN ONE OPERATION. (1008.1.8)
- THE FLOOR OR LANDING ON EACH SIDE OF DOORS SHALL NOT BE MORE THAN 1/2-IN. LOWER THAN THE THRESHOLD OF THE DOORWAY. RAISED THRESHOLDS AND FLOOR LEVEL CHANGES GREATER THAN 1/4-IN. AT DOORWAYS SHALL BE BEVELED WITH A SLOPE NOT GREATER THAN ONE UNIT VERTICAL IN TWO UNITS HORIZONTAL (50% SLOPE). (1008.1.6)

# FINISH NOTES

INTERIOR FINISH MATERIALS APPLIED TO WALL & CEILINGS SHALL BE TESTED AS SPECIFIED IN SECTION 803.

**DEPARTMENT**OM RENOVATION OLICE LOCKER RC ۵ TORRANCI WOMEN'S RESTRO OOR & FINISE INTERIOR EL

Issue

CITY REVIEW

PLAN CHECK SUBMITTAL

REVISED PLAN CHECK FINAL

PLAN CHECK FINAL

CONSTRUCTION DOCUMENTS 16.JAN.15 3.MAR.15

1.APR.15

20.MAY.15

6.OCT.15

Copyright 2004 26.SEP.14 Drawn Checked WLJ

# GENERAL NOTES

- 1. THE WORK OF THIS SECTION INCLUDES ALL PLUMBING WORK AND EQUIPMENT NEEDED FOR A COMPLETE & PROPER INSTALLATION & OPERATION. WORK INDICATED ON DRAWINGS BUT NOT MENTIONED IN THE SPECIFICATIONS, OR VICE VERSA, SHALL BE PERFORMED THE SAME AS IF SPECIFICALLY MENTIONED OR INDICATED IN BOTH. ANY SUPPLEMENTARY LABOR OR MATERIALS REQUIRED FOR A COMPLETE, APPROVED, AND PROPERLY OPERATING INSTALLATION SHALL BE FURNISHED WHETHER OR NOT INDICATED AND SPECIFIED WITHOUT COST TO THE OWNER.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACQUISITION & PAYMENT FOR ALL PERMITS, INSPECTIONS & RELATED FEES FOR THIS INSTALLATION. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE AND FEDERAL CODES. ALL MATERIAL DEVICES AND EQUIPMENT SHALL BE APPROVED FOR SUCH INSTALLATION.
- CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND DEPTH OF EXISTING LINES, LATERALS AND WYES BEFORE STARTING TRENCHING. SHOULD IT BE NECESSARY TO REROUTE LINES DUE TO CONDITIONS FOUND ON THE SITE, OR IF INDICATED POINTS OF CONNECTIONS CANNOT BE MADE TO THE LINES AS FOUND, THE CONTRACTOR SHALL BEFORE CONTINUING, NOTIFY THE ARCHITECT IN WRITING PRIOR TO INSTALLING ANY WORK WHICH MAY BE AFFECTED.
- 4. THE INSTALLATION SHALL COMPLY WITH ALL OF THE LATEST APPLICABLE ORDINANCES, REGULATIONS & CODES OF ALL AGENCIES HAVING JURISDICTION, INCLUDING THE 2013 CALIFORNIA PLUMBING CODE, 2013 CALIFORNIA BUILDING CODE, TITLE 24 ACCESSIBILITY COMPLIANCE, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
- A. NOTHING IN THESE DRAWINGS AND SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK IN VIOLATION THEREOF.
- B. NO EXTRAS WILL BE PAID FOR FURNISHING ITEMS REQUIRED BY THE CODES, BUT NOT SPECIFIED OR SHOWN ON THE DRAWINGS.
- C. RULINGS AND INTERPRETATIONS OF THE ENFORCING AGENCIES SHALL BE CONSIDERED AS PART OF THE CODE.
- 5. ALL MATERIALS, EQUIPMENT, INSTALLATION, ETC. SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE CITY, COUNTY, STATE AND FEDERAL CODES, ORDINANCES AND REGULATIONS. IN CASE OF CONFLICT WITH CODES DRAWINGS OR SPECIFICATIONS, THE MORE STRINGENT SHALL PREVAIL.
- 6. VERIFY SIZE, LOCATION, DEPTH, ETC. OF ALL EXISTING UTILITIES INFIELD PRIOR TO START OF WORK.
- MAKE ALL ARRANGEMENTS WITH UTILITY COMPANIES FOR SERVICE AND CONNECTIONS AND PAY FOR ALL PERMITS, CHARGES, METERS AND CITY SEWAGE FACILITIES CHARGE.
- 8. ALL SEWER LINES SHALL RUN AT 2% SLOPE UNLESS NOTED OTHERWISE.
- 9. ALL SEWER LINES RUN @ SLOPES LESS THAN 2% ARE SUBJECT TO FIELD APPROVAL OF PLUMBING INSPECTOR.
- 10. RISERS TO BE LOCATED IN WALLS OR COLUMN-FURRING.
- 11. ALL FLOOR CLEANOUT COVERING DECKS SHALL HAVE FINE FINISH.
- 12. ALL WASTE, VENT, COLD WATER AND GAS STUB-OUTS SHALL BE CAPPED, SIZE ON RISER DIAGRAM.
- 13. ALL SERVICE OUTLETS FOR FIXTURES AND EQUIPMENT SHALL BE PROVIDED WITH A LINE SIZE SHUT OFF VALVE.
- 14. ALL FLOOR SINKS AND FLOOR DRAINS SHALL BE PROVIDED WITH A HALF INCH TRAP PRIMER.
- 15. CONTRACTOR SHALL FURNISH AND INSTALL, AT NO EXTRA COST TO THE OWNER, TRAP PRIMERS WHERE REQUIRED BY CODE. WHERE A COLD WATER SERVICE LINE TO A FREQUENTLY USED FIXTURE IS AVAILABLE, THE TRAP PRIMER SHALL BE PPP P1-500 WITH INTEGRAL VACUUM BREAKER. PROVIDE ADAPTER FITTINGS WITH PRIMER TAPS AS REQUIRED.
- 16. MANUFACTURER OF PLUMBING PRODUCTS MUST HAVE ANSI/NSF STANDARD 61, SECTION 9 CERTIFICATION TO DEMONSTRATE COMPLIANCE WITH THE FEDERAL REQUIREMENTS FOR LEAD CONTRIBUTION TO DRINKING WATER (SAFE DRINKING WATER ACT SDWA AND AB 1953).
- 17. PROVIDE ACCESS DOORS TO ALL CONCEALED VALVES, STRAINERS, TRAP PRIMERS, ETC.
- 18. ALL PIPING IN FINISHED AREAS SHALL BE RUN CONCEALED. EXPOSED PIPING, WHERE NECESSARY, SHALL RUN AS HIGH AS POSSIBLE AND TIGHT TO THE WALLS.
- 19. EXACT LOCATIONS, DIMENSION & MOUNTING HEIGHTS OF PLUMBING FIXTURES SHALL BE OBTAINED FROM ARCHITECTURAL, STRUCTURAL AND KITCHEN DRAWINGS.
- 20. INSTALL ALL PLUMBING IN COORDINATION WITH ELECTRICAL. MECHANICAL. ARCHITECTURAL & STRUCTURAL DRAWINGS & TRADES.
- 21. WATER CLOSETS FOR PUBLIC USE ARE TO BE ELONGATED BOWLS WITH OPEN FRONT TOILET SEAT. CPC 408.

- 22. INSTALL WATER HAMMER ARRESTERS ON EACH COLD & HOT WATER FIXTURE BRANCH AS RECOMMENDED BY PLUMBING AND DRAINAGE INSTITUTE WH-210 STANDARD. DEVICES SHALL BE FACTORY MADE WITH PERMANENT CUSHION OF GAS OR AIR. PROVIDE ACCESS PANEL
- 23. PROVIDE WATER HAMMER ARRESTORS PER PDI STANDARD.
- 24. CONSTRUCTION NOTES:
  - A. VERIFICATION OF DIMENSIONS: SCALED & FIGURED DIMENSIONS ARE APPROXIMATE, BEFORE PROCEEDING WITH ANY WORK, CHECK & VERIFY DIMENSIONS AND SIZES, AND ASSUME FULL RESPONSIBILITY FOR FITTING IN OF EQUIPMENT & MATERIALS TO OTHER PARTS OF EQUIPMENT AND TO THE STRUCTURE WHERE APPARATUS AND EQUIPMENT HAVE BEEN INDICATED ON THE DRAWINGS, DIMENSIONS HAVE BEEN TAKEN FROM TYPICAL EQUIPMENT OF THE CLASS INDICATED, CHECK DRAWINGS TO SEE THAT EQUIPMENT CONTEMPLATED FOR USE WILL FIT INTO SPACES PROVIDED, WITH AMPLE SPACE FOR MAINTENANCE REQUIREMENTS.
- B. LOCATIONS OF THE PIPING AND FIXTURES INDICATED ON THE DRAWINGS ARE APPROXIMATE ONLY AND SHALL BE CHANGED TO MEET THE ARCHITECTURAL AND STRUCTURAL CONDITIONS AS REQUIRED, AT NO EXTRA COST TO THE OWNER.
- C. DRAWINGS: DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO THE EXTENT THAT ALL OFFSETS, BENDS, SPECIAL FITTINGS & EXACT LOCATIONS ARE NOT INDICATED. EXAMINE DRAWINGS & PREMISES IN ORDER TO DETERMINE BEST METHODS, EXACT LOCATIONS. ROUTES AND BUILDING OBSTRUCTIONS. INSTALL APPARATUS AND EQUIPMENT IN AVAILABLE LOCATIONS.
- 33. THE CONTRACTOR SHALL RECORD ON "AS BUILT" DRAWINGS ALL SIZES MATERIALS, LOCATIONS AND DEPTHS OF BURIED PIPING, PLUGGED TEES, FUTURE CONNECTIONS AND ALL CHANGES IN PIPING FROM THAT SHOWN ON DRAWINGS, AND SUBMIT SUCH SET AT COMPLETION OF WORK.
- 34. GUARANTEE ALL LABOR AND MATERIALS FOR ONE YEAR OR AS INDICATED IN THE SPECIFICATIONS.

# PLAN CHECK NOTES

- ENERGY CONSERVATION (PLUMBING)
- A. ALL HOT WATER SUPPLY & RETURN PIPING SHALL BE INSULATED.
- a. 1" OF R-4 INSULATION FOR UP TO 1" PIPE.
- b. 1 1/2" OF R-4 INSULATION FOR 1 1/4" PIPE AND LARGER.
- c. PROVIDE FIBERGLASS BATT INSULATION WITH ALUMINUM VAPOR BARRIER FOR ALL WATER LINES INCLUDING THAT ARE EXPOSED, INSTALLED INSIDE EXTERIOR WALLS AND INSTALLED INSIDE YARD BOXES.
- d. COMPLY WITH LATEST T-24 PIPE INSULATION REQUIREMENTS.
- B. SHOWER HEADS, LAVATORY FAUCETS AND SINKS (NOT INCLUDING SERVICE SINK FAUCETS), SHALL MEET THE FLOW REQUIREMENTS OUTLINED IN THE APPLIANCE EFFICIENCY STANDARDS.
- 2. TYPE "L" HARD DRAWN COPPER SHALL BE INSTALLED FOR ALL POTABLE WATER ABOVE GRADE.
- FOR ACCESSIBILITY REQUIREMENTS, SEE ARCHITECTURAL DRAWINGS.
- 4. SELECTED FIXTURE INFORMATION, ALSO REFER TO SPECIFICATION FOR
- 5. ALL HORIZONTAL DRAINAGE PIPING SHALL BE PROVIDED WITH CLEANOUT AT UPPER TERMINAL. (SECTION 707.4).
- 6. ALL REQUIRED CLEANOUTS SHALL BE INSTALLED AS PER SECTION 707.0 AND 719.0 OF THE PLUMBING CODE.
- NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE ACCORDING TO THE METHOD SET IN SECTION 609.9 OF THE PLUMBING CODE.
- . ACCESSIBLE WATER HAMMER ARRESTERS SHALL BE INSTALLED FOR QUICK-ACTING VALVES. LOCATION AND METHOD OF INSTALLATION SHALL COMPLY WITH THE MANUFACTURER'S RECOMMENDATION.

# SEISMIC NOTES

ALL PLUMBING & HVAC EQUIPMENT SHALL BE SECURED TO STRUCTURE PER "GUIDELINES FOR SEISMIC RESTRAINTS" OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS.

FOLLOW LATEST SMACNA AND PPIC GUIDELINES. TEL: (213)487-3790 ISOLATE ALL PLUMBING EQUIPMENT FROM STRUCTURE WITH APPROVED TYPE VIBRATION ISOLATOR MOUNTS.

P	LUMBI	NG LEGEND
SYMBOL	ABBREV	. DESCRIPTION
	S, W	SEWER OR WASTE ABOVE FLOOR
	S, W	SEWER OR WASTE BELOW FLOOP
	V.	VENT
	C.W.	COLD WATER
	H.W.	HOT WATER
	H.W.R.	HOT WATER RETURN
$-\!$	S.O.V.	SHUT-OFF VALVE
	G.L.V.	GLOBE VALVE
——W——	B.C.	BALANCING COCK
<u> </u>	CH.V.	CHECK VALVE
	P.R.V.	PRESSURE REDUCING VALVE
	P.REL.V.	PRESSURE RELIEF VALVE
	P.T.R.V.	PRESSURE TEMP. RELIEF VALVE
——1 <u>4</u> ⊢——	G.C.	GAS COCK
CD	CD	CONDENSATE DRAIN
OD	OD	CONDENSATE OVERFLOW DRAIN
C	DN	DOWN
0		RISE
	C.F.H.	CUBIC FEET PER HOUR
1	C.O.	CLEANOUT
	D.S.	DOWNSPOUT
Φ	F.C.O.	FLOOR CLEANOUT
FM	F.M.	FORCE MAIN
	G.P.M.	GALLONS PER MINUTE
	G.P.H.	GALLONS PER HOUR
<i>'}}}},</i>	(HATCHED)	EXISTING TO BE DEMOLISHED
	I.E.	INVERT ELEVATION
lacksquare	P.O.C.	POINT OF CONNECTION
1 -0	W.C.O.	WALL CLEANOUT

	PLUN	<b>MBIN</b>	IG N	ЛΑТ	ERI	AL S	SCH	IEDU	LE		
SERVICE	MATERIAL	COPPER TYPE "M"	COPPER, TYPE "L"	COPPER TYPE "K"	SOFT COPPER TYPE "L"	BLACK STEEL	GALVANIZED STEEL	CAST IRON SOIL PIPE & FITTINGS	DURIRON		
WATED	INSIDE		•								
WATER	OUTSIDE			0						BELOW	GRADE
SANITARY	INSIDE							<b>•</b>			
DRAINAGE	OUTSIDE							0			
SAN. VENT								0			
CONDENSATE	INSIDE	0									
DRAINAGE	OUTSIDE										
	RIAL SHALL ME GRADE & INSI	•		•	ME SPRE NOTE:	AD SAF	ETY RAT	ING.			

(2) ABOVE GRADE. EXPOSED TO WEATHER.

NO GALVANIZED PIPE IS ALLOWED FOR WASTE, VENT, HOT AND COLD WATER PIPING INCLUDING TRAP AND TRAP ARMS ETC.

# WATER PIPE SIZING BASE ON FRICTION LOSS OF 3 PSI PER 100FT.

### COLD WATER SIZING TABLE (8 FPS MAX. VELOCITY) 1/2 3/4 1-1/4 1-1/2 2-1/2 3.5 SIZE 12 158 380 1120 1743 46 65 245 699 1743 10 1120 LIGH WATER OFING TABLE /E EDG MAY VELOCITY

		HOI W	AIER S	IZING I	ARLE (2	FPS M	AX. VEL	OCHY)		
PIPE SIZE	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	3.5	4
FT FU	_	5	12	24	46	120	246	412	603	851

	SHEET INDEX
SHEET NO.	DESCRIPTION
P0-1	PLUMBING GENERAL NOTES, FIXTURES AND MATERIAL SCHEDULES, LEGEND AND SHEET INDEX
P1-1	PLUMBING DEMOLITION FLOOR PLAN
P2-1	PLUMBING FLOOR PLAN
P5-1	PLUMBING DETAILS

# PLUMBING FIXTURE SCHEDULE

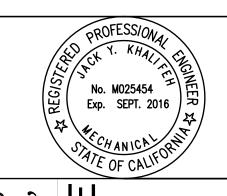
SYMB.	DESCRIPTION	W.	TRAP	V.	C.W.	H.W.	REMARKS
WC-1	WATER CLOSET	4"	INT.	2"	1-1/2"	_	AMERICAN STANDARD #3451.001 "MADERA FLOWISE" VITREOUS CHINA, 15" HEIGHT W/ EVERCLEAN, ELONGATED BOWL, FLOOR MOUNTED TOILET W/ 1-1/2" TOP SPUD. FLUSH VALVE: SLOAN DUAL FLUSH VALVE MODEL WES-111 (1.1 GPH/1.6 GPH); SEAT: OLSONITE #10 WHITE SOLID PLASTIC OPEN FRONT SEAT; BOLTS: BRASS OR STAINLESS STEEL.
WC-2	WATER CLOSET (ADA)	4"	INT.	2"	1-1/2"	_	AMERICAN STANDARD #3461.001 "MADERA FLOWISE" VITREOUS CHINA, 16-1/2" HEIGHT W/ EVERCLEAN, ELONGATED BOWL, FLOOR MOUNTED TOILET W/ 1-1/2" TOP SPUD. FLUSH VALVE: SLOAN DUAL FLUSH VALVE MODEL WES-111 (1.1 GPH/1.6 GPH); SEAT: OLSONITE #10 WHITE SOLID PLASTIC OPEN FRONT SEAT; BOLTS: BRASS OR STAINLESS STEEL.
L-1	LAVATORY	2"	1 1/4" X 1 1/2"	2"	3/4"	3/4"	AMERICAN STANDARD #0497.221 "OVALYN"; FAUCET: CHICAGO #420-E39VPABCP, SINGLE LEVER 4" CENTER SET WITH LEVER HANDLE, 0.35 GPM VANDAL PROOF NON-AERATING OUTLET, VOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE. DRAIN: 1-1/4"x1-1/2" L.A. PATTERN CAST BRASS P-TRAP COVERED WITH PIPE INSULATION;
L-2	LAVATORY (ADA)	2"	1 1/4" X 1 1/2"	2"	3/4"	3/4"	SUPPLY STOPS: BRASSĆRAFT #HCR1920AZC, 2 REQUIRED AND COVERED WITH PIPE INSULATION.  L-2 IS SAME AS L-1.
SH-1	SHOWER	2"	2"	2"	3/4"	3/4"	REFER TO ARCHITECTURAL PLANS. PROVIDE SYMMONS TEMPTROL PRESSURE—BALANCING MIXING VALVE 96—500—B30—XLV WITH INTEGRAL VOLUME CONTROL AND ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN. 4—131—1.5 GPM SHOWER HEAD. PROVIDE EXTRA 1.5 GPM HAND SPRAY SHOWER WITH ARM AND FLANGE AND INTEGRAL SERVICE STOPS. FLOOR DRAIN: J.R. SMITH 2005.
SH-2	SHOWER (ADA)	2"	2"	2"	3/4"	3/4"	REFER TO ARCHITECTURAL PLANS. PROVIDE SYMMONS TEMPTROL PRESSURE—BALANCING MIXING VALVE 96-500-B30-XLV WITH INTEGRAL VOLUME CONTROL AND ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN. 4-131-1.5 GPM SHOWER HEAD. PROVIDE EXTRA 1.5 GPM HAND SPRAY SHOWER WITH ARM AND FLANGE AND INTEGRAL SERVICE STOPS. FLOOR DRAIN: J.R. SMITH 2005.
FD-1	FLOOR DRAIN	2"	2"	2"	_	_	J.R. SMITH #2005-A (FOR NON-TILE FLOORS). REGULARLY FURNISHED WITH TRAP PRIMER CONNECTION AND ADJUSTABLE. PROVIDE NICKEL BRONZE HEEL PROOF STRAINER. PROVIDE CAST IRON P-TRAP. REFER TO PLUMBING FLOOR PLAN AND RISER DIAGRAMS FOR PIPE SIZES.

1. PROVIDE WATER HAMMER ARRESTORS PER PDI STANDARD.

2. NO GALVANIZED PIPE IS ALLOWED FOR WASTE. VENT. HOT AND COLD WATER PIPING INCLUDING TRAPS AND TRAP ARMS ETC.

**KHALIFEH** & ASSOCIATES, INC.

KHALIFEH & ASSOCIATES, INC.

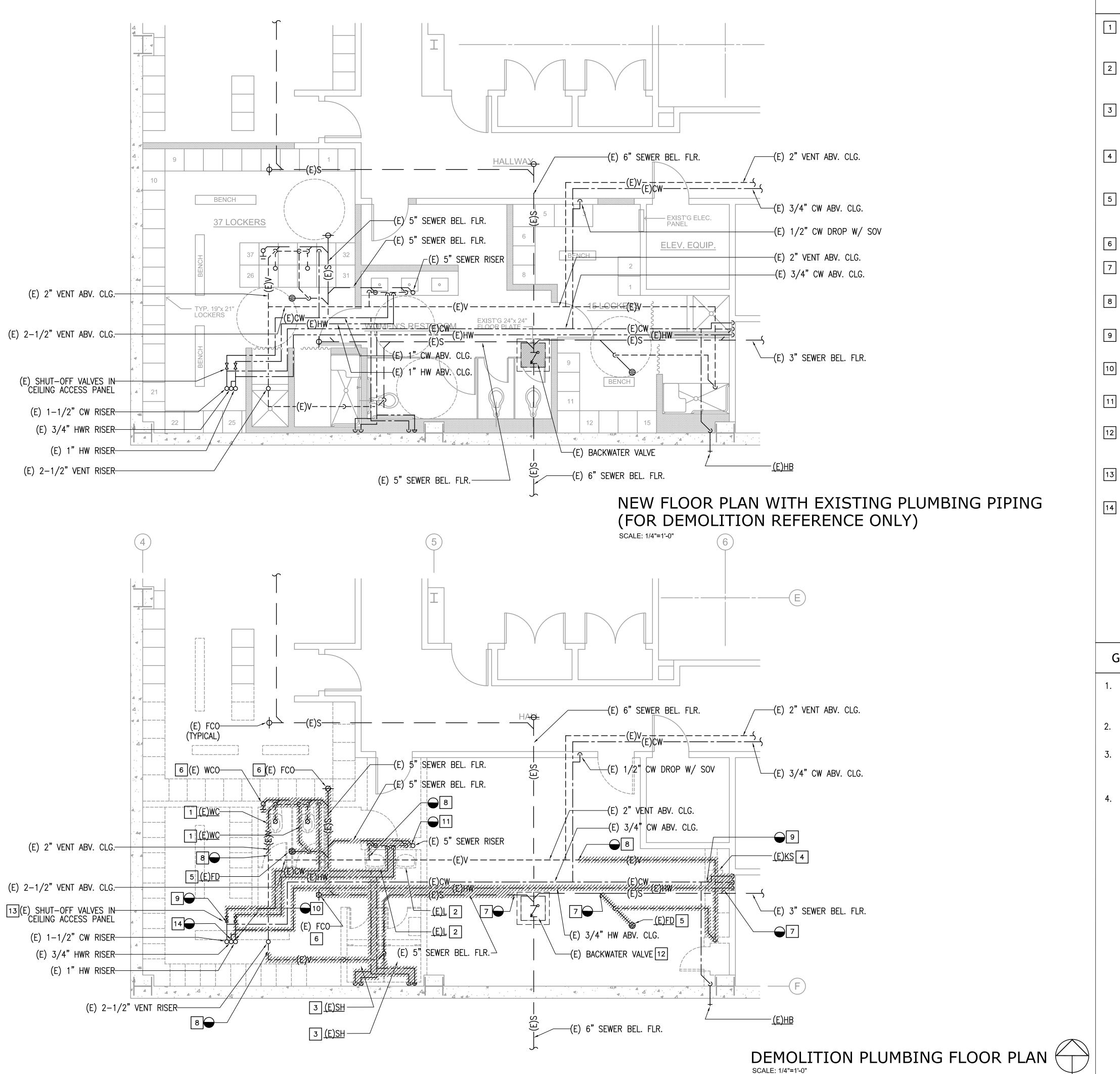


16.JAN.15

Date 16.JAN.15 JJPR Drawn Checked Scale AS NOTED

Job. No.

P0-1



DEMOLITION KEYNOTES

- REMOVE EXISTING WATER CLOSET INCLUDING ASSOCIATED WASTE, VENT, COLD WATER PIPING AND ACCESSORIES. CAP PIPING TO THE NEAREST ACTIVE TEE.
- 2 REMOVE EXISTING LAVATORY INCLUDING ASSOCIATED WASTE, VENT, COLD WATER AND HOT WATER PIPING AND ACCESSORIES. CAP PIPING TO THE NEAREST ACTIVE TEE.
- REMOVE EXISTING SHOWER INCLUDING ASSOCIATED FLOOR DRAIN, WASTE, VENT, COLD WATER AND HOT WATER PIPING AND ACCESSORIES. CAP PIPING TO THE NEAREST ACTIVE TEE.
- REMOVE EXISTING KITCHEN SINK INCLUDING ASSOCIATED WASTE, VENT, COLD WATER AND HOT WATER PIPING AND ACCESSORIES. CAP PIPING TO THE NEAREST ACTIVE TEE.
- REMOVE EXISTING FLOOR DRAIN INCLUDING ASSOCIATED WASTE, VENT PIPING AND ACCESSORIES. CAP PIPING TO THE NEAREST ACTIVE TEE.
- 6 REMOVE EXISTING CLEANOUT.
- 7 POINT OF DEMOLITION TO EXISTING UNDERGROUND SEWER LINE. VERIFY EXACT LOCATION IN THE FIELD.
- 8 POINT OF DEMOLITION TO EXISTING VENT LINE ABOVE CEILING. VERIFY EXACT LOCATION IN THE FIELD.
- 9 POINT OF DEMOLITION TO EXISTING COLD WATER LINE ABOVE CEILING. VERIFY EXACT LOCATION IN THE FIELD.
- POINT OF DEMOLITION TO EXISTING HOT WATER LINE ABOVE CEILING. VERIFY EXACT LOCATION IN THE FIELD.
- POINT OF DEMOLITION TO EXISTING SEWER LINE ABOVE CEILING. VERIFY EXACT LOCATION IN THE FIELD.
- EXISTING BACKWATER VALVE TO REMAIN. VERIFY EXACT LOCATION IN THE FIELD. RELOCATE IF REQUIRED TO CLEAR THE NEW PLUMBING FIXTURES.
- EXISTING SHUT-OFF VALVES AND CEILING ACCESS PANEL TO BE REMOVED. VERIFY EXACT LOCATION IN THE FIELD.
- REMOVE EXISTING HOT WATER RETURN LINE. EXISTING HOT WATER RETURN RISER TO REMAIN.

KHALIFEH 8 ASSOCIATES, INC.

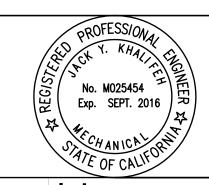
S

KHALIFEH & ASSOCIATES, INC.

13465 BEACH AVE., SUITE B TEL: (310) 305-16

MARINA DEL REY, CA 90292 FAX: (310) 305-16

CONSULTING ENGINEERS



OOR PLAN

ORRANCE POLICE

EPARTMENT

Issue

# GENERAL DEMOLITION NOTES

- 1. LOCATIONS OF EXISTING EQUIPMENT, DUCTS, PIPES, ETC. ARE APPROXIMATE AND ARE INDICATED FOR REFERENCE ONLY. THE EXACT LOCATIONS SHALL BE VERIFIED IN THE FIELD.
- 2. CLEAN THE SORROUNDING OF WORK AREA ON A DAILY BASIS AND DISPOSE OF ALL DEBRIS IN AN APPROVED MANNER.
- . REPAIR AND PATCH ALL AFFECTED AREAS INCLUDING WALL AND ROOF OPENINGS TO MATCH EXISTING SURROUNDINGS AND MAINTAIN THE FIRE RATING OF EXISTING STRUCTURES.
- 4. DEMOLISHED ALL EXISTING EQUIPMENT AND PLUMBING FIXTURES THAT ARE HATCHED.

16.JAN.15

ABOVE DRAWINGS AND SPECIFICATIONS AND IDEAS, DESIGNS AND NEEMENTS REPRESENTED THEREBY ARE AND SHALL REMAIN THE ERTY OF THE ARCHITECT. AND NO PART THEREOF SHALL BE COPIED. LOSED TO OTHERS OR USED IN CONNECTION WITH ANY WORK OF READ THAN THE SPECIFIC PROJECT FOR WHICH THEY HAVE BEEN PREPAR DEVICE OF THE WRITTEN CONSENT OF THE ARCHITECT. V ACT WITH THESE DRAWINGS OR SPECIFICATIONS SHALL CONSTITUT. LUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

TEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OF ED DIMENSIONS. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLAND IMPOSIONS AND CONDITIONS ON THE JOB AND THIS OFFICE MILLIUM SHALL WAY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS FROM THE DIMENSIONS AND CONDITIONS.

Copyright 2004

Date 16.JAN.15

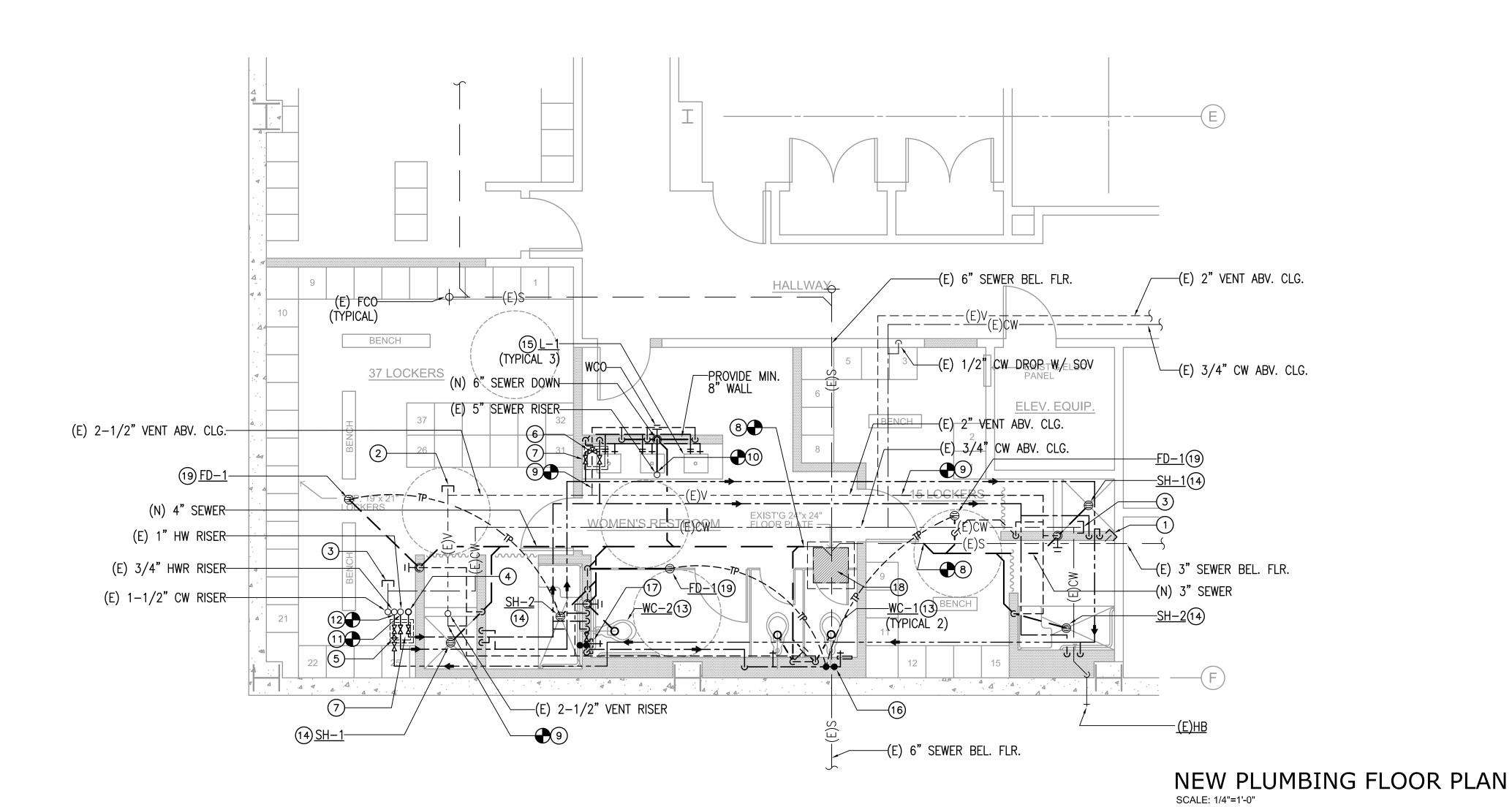
Drawn JJPR

Checked JK

Scale AS NOTED

Job. No. --

P1-1



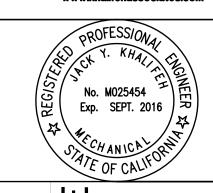
# **KEY NOTES**

- 1 CAP EXISTING UNDERGROUND SEWER LINE. VERIFY EXACT LOCATION IN THE FIELD.
- 2 CAP EXISTING VENT LINE ABOVE CEILING. VERIFY EXACT LOCATION IN
- 3 CAP EXISTING COLD WATER LINE ABOVE CEILING. VERIFY EXACT LOCATION IN THE FIELD.
- 4) 2" COLD WATER LINE UP TO CONNECT TO THE EXISTING 2-1/2" COLD WATER SUPPLY MAIN IN THE GROUND FLOOR LEVEL. VERIFY EXÁCT LOCATION IN THE FIELD.
- (5) PROVIDE GRISWOLD FLOW CONTROL VALVE MODEL 3801FLS1 FOR FOR SWEAT CONNECTION.
- 6 PROVIDE POINT OF USE THERMOSTATIC MIXING VALVE POWERS MODEL LM496-2 SWEAT CONNECTION IN CEILING ACCESS PANEL.
- 7 COLD WATER AND HOT WATER SHUT-OFF VALVES IN CEILING ACCESS PANEL. VERIFY EXACT LOCATION WITH ARCHITECT.
- (8) POINT OF CONNECTION TO EXISTING UNDERGROUND SEWER LINE. VERIFY EXACT LOCATION IN THE FIELD.
- (9) POINT OF CONNECTION TO EXISTING VENT LINE ABOVE CEILING. VERIFY EXACT LOCATION IN THE FIELD.
- (10) POINT OF CONNECTION TO EXISTING SEWER LINE ABOVE CEILING. VERIFY EXACT LOCATION IN THE FIELD.
- 11) POINT OF CONNECTION TO EXISTING HOT WATER RISER ABOVE CEILING. VERIFY EXACT LOCATION IN THE FIELD.
- POINT OF CONNECTION TO EXISTING HOT WATER RETURN RISER ABOVE 13465 BEACH AVE., SUITE B MARINA DEL REY, CA 90292 FAX: (310) 305-1555 CEILING. VERIFY EXACT LOCATION IN THE FIELD.
- 13 NEW WATER CLOSET. PROVIDE 4" WASTE, 2" VENT, 1-1/2" CW LINE AND OTHER REQUIRED ACCESSORIES.
- 14) NEW SHOWER. PROVIDE 2" WASTE, 2" VENT, 3/4" CW LINE, 3/4" HW LINE AND OTHER REQUIRED ACCESSORIES.
- 15) NEW LAVATORY. PROVIDE 2" WASTE, 2" VENT, 3/4" CW LINE, 3/4" HW LINE AND OTHER REQUIRED ACCESSORIES.
- (16) WATER HAMMER ARRESTER AND TRAP PRIMER. PROVIDE WALL ACCESS PANEL. VERIFY EXACT LOCATION WITH ARCHITECT.
- 17 WATER HAMMER ARRESTER. PROVIDE WALL ACCESS PANEL. VERIFY EXACT LOCATION WITH ARCHITECT.
- (18) EXISTING BACKWATER VALVE TO REMAIN. VERIFY EXACT LOCATION IN THE FIELD. RELOCATE IF REQUIRED TO CLEAR THE NEW PLUMBING FIXTURES.
- (19) NEW FLOOR DRAIN. VERIFY EXACT LOCATION WITH ARCHITECT. PROVIDE 2" WASTE, 2" VENT AND TRAP PRIMER CONNECTION.

NO 723 oceanfront walk venice, california 9 O 2 9 1 LOYD CHIE

> KHALIFEH **8 ASSOCIATES, INC.** CONSULTING ENGINEERS

KHALIFEH & ASSOCIATES, INC.



OR **PLUMBING** 

Issue

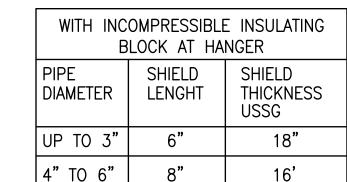
16.JAN.15

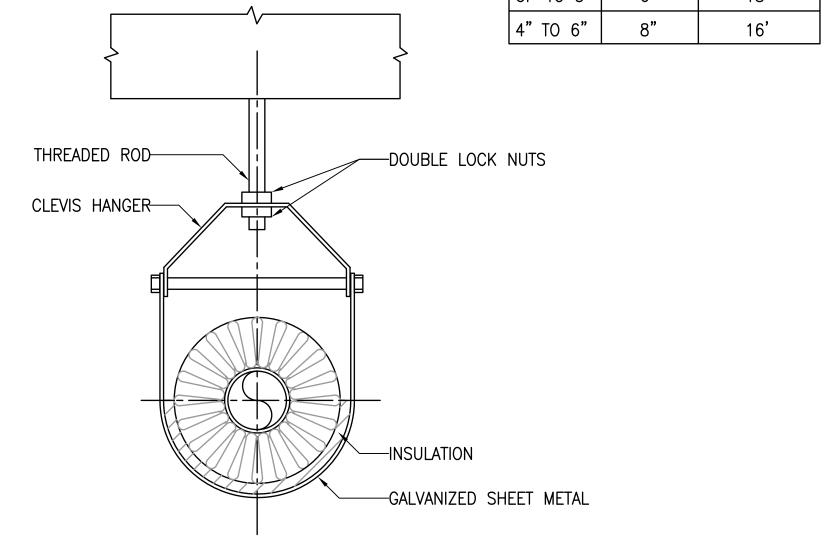
# **GENERAL NOTES**

- . FOR VERTICAL RUNS, CONCEAL PIPES IN FRAMED WALLS OR FURRING WHERE OCCURS.
- 3. PROVIDE ACCESS PANEL TO ALL VALVES, TRAP PRIMER, WATER HAMMER ARRESTOR, ETC. INSIDE PLUMBING WALL.
- 4. RUN PIPES ABOVE CEILING WHERE OCCURS.
- 5. MECHANICAL EQUIPMENT SHOWN FOR REFERENCE ONLY, REFER TO MECHANICAL PLAN FOR EXACT LOCATION.
- 6. RUN PLUMBING PIPES ABOVE THE SOFFITS (IN THE JOIST BAYS), IN ORDER TO AVOID INTERFERENCE WITH HVAC DUCTS AND EQUIPMENTS.
- MAINTAIN 2% SLOPE ON ALL SEWER LINE, PROVIDE CLEANOUT EVERY 100 FT. OF LENGTH.
- 8. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER CONNECTION TO ALL PLUMBING EQUIPMENT.
- 9. ALL EXISTING PLUMBING FIXTURES MUST BE CLEAN AND TO BE POLISHED BY THE CONTRACTOR TO LOOK LIKE NEW.

Copyright 2004

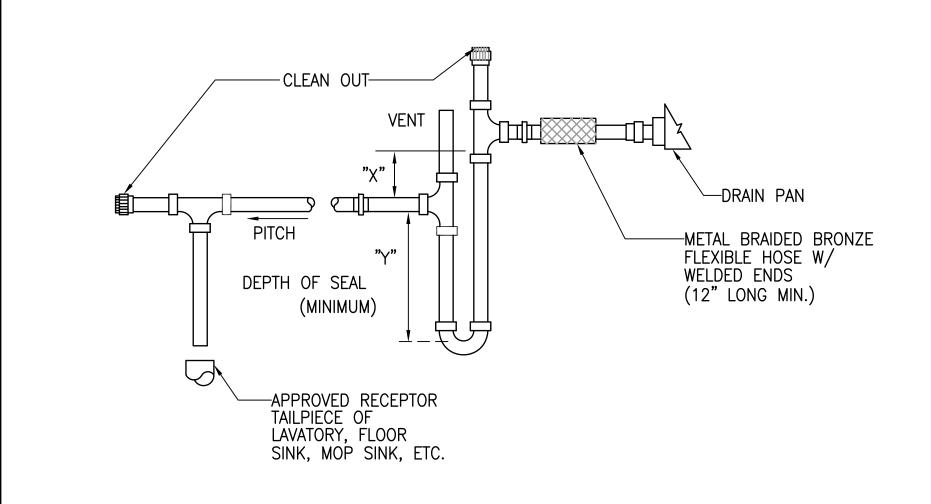
Date 16.JAN.15 JJPR Drawn Checked Scale AS NOTED Job. No.





# CAST IRON CLEANOUT-W/COVER FOR DUTY REQUIRED -6" THICK CONCRETE GRADE OR PAVING-CAST IRON-**EXTENSION** SAME SIZE AS SEWER UP TO 6" DIA. CAST IRON LONG SWEEP 1/4 BEND OR CAST IRON COMB "Y" & 1/8 BEND (USE REDUCING TYPE WHERE REQUIRED) SEWER MATERIAL AND

COND	ENSATE DR	AIN PIPE S	CHEDULE
UNIT	NOMINAL TONS	DRAIN SIZE (IN.)	"X" (IN.)
PAC	SEE PAC SCHEDULE	3/4"	1" MIN.



# NOTE:

HANGER, ROD & INSERT SHALL BE DIPPED IN ZINC CHROMATE PRIMER PRIOR TO INSTALLATION

TYP.	INSULATED	PIPE	SUPPORT

CALE	6
IONE	P5.1

# FLOOR CLEANOUTS

SCALE 4 **P5.1** NONE

# CONDENSATE DRAIN PIPING DETAIL

10'-0"

AROUND SLEEVES

BEFORE POURING

SCALE

NONE

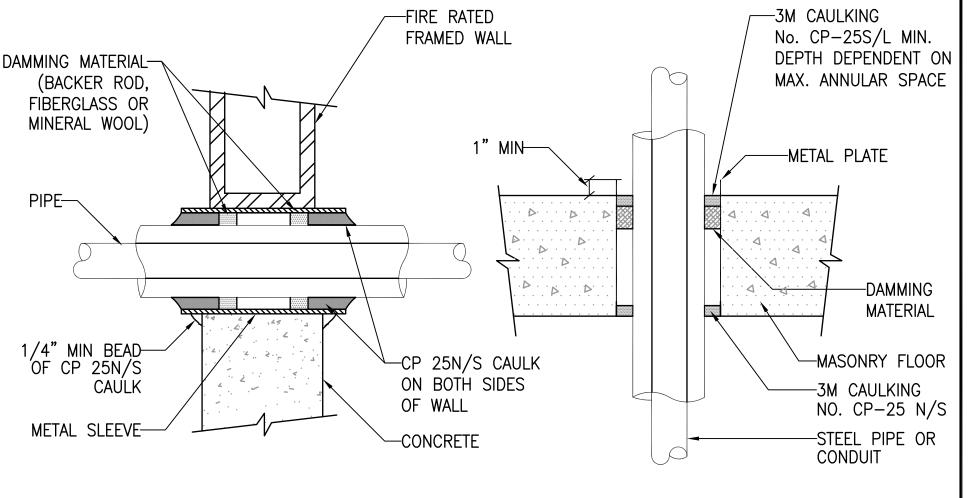
FOOTING

SCALE **2** ` **P5.1 NONE** 

-ACOUSTICAL SEALANT -FIBERGLAS INSULATION 1.5 PCF MAX. 100% FILL -PIPE INSULATION WHERE OCCURS -25 GA. (MIN.) METAL SLEEVE -PARTITION CEILING WALL ROOF OR FLOOR CONSTRUCTION (VARIES)

# NOTES:

- 1. PROVIDE PITCH POCKET CONSTRUCTION, ADDITIONAL FLASHING OR WEATHER CAP AS REQUIRED FOR WATER PROOF CONSTRUCTION. DO NOT MECHANICALLY TIE PIPE TO STRUCTURE IN ANY WAY.
- 2. SPACE BETWEEN PIPE AND SLEEVE SHALL BE FREE OF ANY FOREIGN MATERIALS.
- 3. PIPE SHALL NOT CONTACT STRUCTURE AT ANY TIME. WEDGES SHALL NOT BE USED TO MAINTAIN PIPE IN POSITION.
- 4. PIPE MUST BE APPROXIMATELY CENTERED IN OPENING. PROVIDE ADDITIONAL CLEARANCE FOR POSITIONAL CHANGE OF PIPE DUE TO LOADING OF PIPE OR OPERATION OF SYSTEM.



# **SPECIFICATIONS:**

PENETRATIONS IN FIRE RESTRICTIVE WALLS, PARTITIONS AND FLOORS WHERE PROTECTED OPENINGS ARE REQUIRED SHALL BE FIRE STOPPED USING APPROVED MATERIALS, SECURELY INSTALLED AND CAPABLE OF MAINTAINING THEIR INTEGRITY AND PREVENTING THE MOVEMENT OF FLAMES AND/OR GASES THROUGH THE VOID SPACES BETWEEN PENETRATING MATERIALS AND WALLS, PARTITIONS AND FLOORS WHEN TESTED IN ACCORDANCE WITH ASTM STANDARD E-814 OR UL STANDARD 1479 (UBC SECTIONS 4304(e), 4305(a) & 4305(b)).

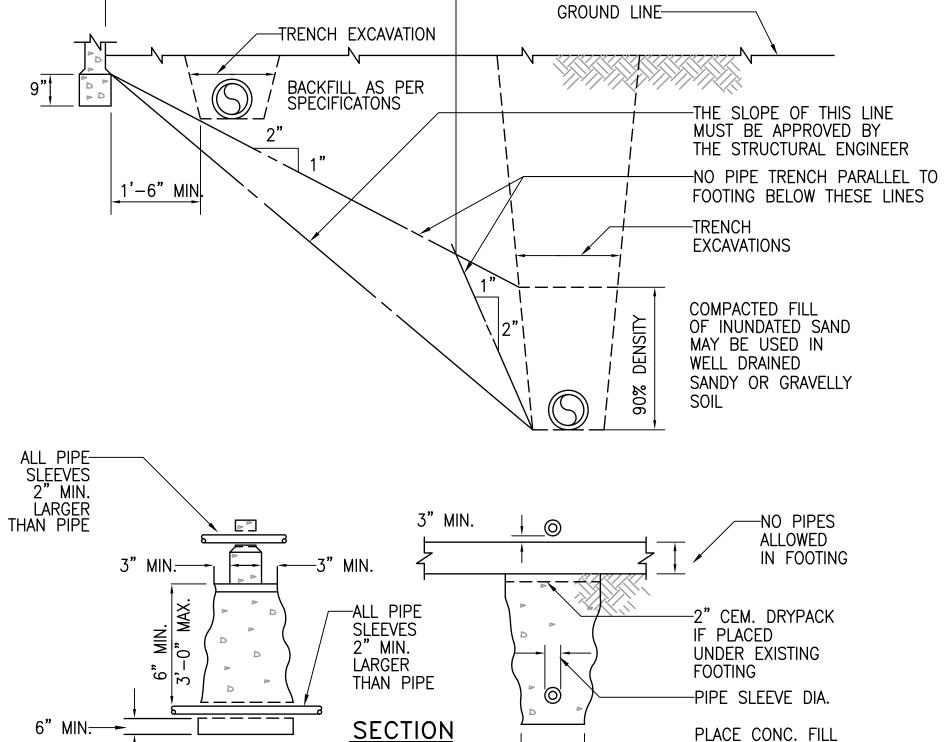
PROVIDE DESIGN DETAILS ON DRAWINGS DEPICTING APPROVED (LISTED) METHODS AND MATERIALS USED TO PROTECT PENETRATIONS WALLS, PARTITIONS AND FLOORS.

DESIGNS ARE LISTED BY UNDERWRITER'S LABORATORIES (FIRE RESISTANCE DIRECTORY) AND THE CALIFORNIA STATE FIRE MARSHALL (BUILDING MATERIAL LISTINGS). SPECIFIC DESIGN INFORMATION IS AVAILABLE FROM U.L CSFM OR THE PRODUCT MANUFACTURER.

SIZE AS SPECIFIED

# NOTES:

3M FIRE BARRIER PRODUCTS: CALIFORNIA STATE FIRE MARSHALL LISTING No. 4485-941:100 U.L. DESIGN No. CAJ1001 (CONC. WALL OR FLR) U.L. DESIGN No. WL1001 (STUD WALL)



ISOLATED	PIPE	PENETRATIO
----------	------	------------

SCALE **5** ` P5.1 **NONE** 

TYPICAL FIRESTOP ASSEMBLY FOR PIPE PENETRATIONS

SCALE ໌ 3 ` P5.1 NONE

UNDERGROUND PIPE DETAIL

NOT PARALLEL

TO FOOTING

P5-1 P5.1

WILLIAM

AIL

DE

**PLUMBING** 

Issue

**KHALIFEH** & ASSOCIATES, INC. CONSULTING ENGINEERS



TORRANCE DEPARTMEN

16.JAN.15

Date 16.JAN.15

Drawn JJPR Checked Scale AS NOTED Job. No.

# GENERAL NOTES 1. SCOPE. THE WORK OF THIS SECTION INCLUDES ALL MECHANICAL WORK AND EQUIPMENT NEEDED FOR A COMPLETE AND PROPER INSTALLATION AND OPERATION. WORK INDICATED ON DRAWINGS BUT NOT MENTIONED

- IN THE SPECIFICATIONS, OR VICE VERSA, SHALL BE PERFORMED THE SAME AS IF SPECIFICALLY MENTIONED OR INDICATED IN BOTH. ANY SUPPLEMENTARY LABOR OR MATERIALS REQUIRED FOR A COMPLETE APPROVED, AND PROPERLY OPERATING INSTALLATION SHALL BE FURNISHED WHETHER OR NOT INDICATED AND SPECIFIED WITHOUT COST TO THE OWNER.
- 2. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACQUISITION AND PAYMENT FOR ALL PERMITS, INSPECTIONS AND RELATED FEES FOR THIS INSTALLATION. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CITY. COUNTY. STATE AND FEDERAL CODES. ALL MATERIAL DEVICES AND EQUIPMENT SHALL APPROVED FOR SUCH
  - INSTALLATION. THE USE OF THOSE MANUFACTURED DEVICES LISTED IN SECTION 2-5301(G) CEC TITLE 24 ENERGY CODE SHALL BE LIMITED TO ONLY THOSE THAT HAVE BEEN CERTIFIED TO THE CALIFORNIA ENERGY COMMISSION.
- 3. THE INSTALLATION SHALL COMPLY WITH ALL OF THE LATEST APPLICABLE ORDINANCES, REGULATIONS AND CODES OF ALL AGENCIES HAVING JURISDICTION, INCLUDING THE UNIFORM MECHANICAL CODE, CITY OF TORRANCE BUILDING AND SAFETY DEPARTMENT AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
  - A. NOTHING IN THESE DRAWINGS AND SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK IN VIOLATION THEREOF
  - B. NO EXTRAS WILL BE PAID FOR FURNISHING ITEMS REQUIRED BY THE CODES, BUT NOT SPECIFIED OR SHOWN ON THE DRAWINGS.
  - C. RULINGS AND INTERPRETATIONS OF THE ENFORCING AGENCIES SHALL BE CONSIDERED AS PART OF THE CODE.
- 4. CONTRACTOR SHALL BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BID PROPOSAL AND VERIFY SCOPE OF WORK REQUIRED.
- 5. COORDINATE ALL WORK WITH OTHER TRADES. MAINTAIN PROPER CLEARANCES AND HEADROOM AT EQUIPMENT AND ETC. FOR INSPECTION AND SERVICE.
- 6. ALL MATERIALS AND EQUIPMENT PROVIDED SHALL BE NEW.
- 7. GUARANTEE:
  - A. ALL MATERIALS, DEVICES AND EQUIPMENT PROVIDED AND/OR INSTALLED UNDER THIS DIVISION OF SPECIFICATIONS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL COMPLETION OF THE WORK, OR LONGER, WHERE SPECIFIED HEREIN. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO DEFEC-TIVE MATERIALS OR FAULTY WORKMANSHIP, THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR AND MATERIALS TO CORRECT THE TROUBLE WITHOUT ANY COST TO THE OWNER. ANY DEFECTIVE MATERI-ALS OR INFERIOR WORKMANSHIP NOTICED AT THE TIME OF INSTALLA-TION AND/OR DURING THE GUARANTEE PERIOD SHALL BE CORRECTED IMMEDIATELY TO THE ENTIRE SATISFACTION OF THE OWNER AND THE ARCHITECT.
  - B. HVAC CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND THE SUCCESSFUL AND SATISFACTORY OPERATION OF ALL SYSTEM AND APPARATUS INSTALLED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE, WITHOUT COST TO THE OWNER
- 8. CONTRACTOR SHALL FORWARD A MINIMUM OF 6 COPIES OF SUBMITTAL TO THE OWNER'S REPRESENTATIVE FOR APPROVALS AS FOLLOWS:
  - MANUFACTURER'S DATA: FOR EACH MANUFACTURED ITEM, DESCRIPTIVE LITERATURE CATALOG MODEL NO., AND ALL OTHER INFORMATION NECESSARY TO ESTABLISH CONTRACT COMPLIANCE.
  - B. SHOP DRAWINGS FOR INSTALLATION OF EQUIPMENT. DUCTWORK AND PIPING.
- 9. THE CONTRACTOR SHALL MAINTAIN "AS-BUILT" REPRODUCIBLE DRAWINGS OF ALL WORK, AS THE JOB PROGRESSES. A SEPARATE SET OF DRAWINGS FOR THIS PURPOSE ONLY SHALL BE KEPT AT THE JOB SITE AT ALL TIMES AND IT SHALL BE REQUIRED THAT THESE TO BE KEPT UP TO DATE.
- 10. THE HVAC CONTRACTOR SHALL TEST, ADJUST AND PLACE IN PROPER OPERATION ALL SYSTEMS INSTALLED UNDER THE WORK OF THIS SECTION.
- 11. PROVIDE A WRITTEN REPORT ON SYSTEM OPERATION, SETTINGS AND CONDITION OF ALL EQUIPMENT.
- 12. WHEN ALL REQUIRED PORTIONS OF THE WORK HAVE BEEN COMPLETED AND AT A TIME DESIGNATED BY THE OWNER, THOROUGHLY DEMONSTRATE TO THE OWNER'S MAINTENANCE PERSONNEL THE OPERATION AND MAINTENANCE OF ALL ITEMS INSTALLED UNDER THE WORK OF THIS
- 13. THE CONTRACTOR SHALL PROVIDE THE BUILDING OWNER, FOUR BOND COPIES OF SYSTEM EQUIPMENT CONTROL DIAGRAMS, REPORTS, MAINTENANCE AND OPERATING BROCHURES KEYED TO UNIT LABELING. WITH SERVICE INSTRUCTION AND PARTS LIST.
- 14. THE CONTRACTOR SHALL PROCURE THE SERVICES OF AN INDEPENDENT AIR BALANCE AND TESTING AGENCY (THE HVAC CON-TRACTOR IS RESPONSIBLE FOR THE INSTALLATION MAY PERFORM THE AIR BALANCE) TO PERFORM TOTAL BALANCING. THE AIR BALANCE CONTRACTOR SHALL BE CERTIFIED BY THE ASSOCIATED AIR BALANCE COUNCIL (AABC). THIS WORK SHALL CONFORM TO AABC SPECIFICA-TIONS REFERRED TO IN CHAPTERS 17 THROUGH 26 OF AABC NATIONAL STANDARD.
- 15. PERMANENT ACCESS TO ALL ROOF MOUNTED EQUIPMENT SHALL BE PROVIDED IN ACCORDANCE WITH CODE REQUIREMENTS.

16. DRAWINGS ARE SCHEMATIC IN NATURE AND NOT DRAWN TO SCALE CONTRACTOR IS RESPONSIBLE FOR COORDINATING EXACT ROUTING OF ALL SERVICES WITH EXISTING CONDITIONS AND WITH ALL OTHER

**GENERAL NOTES** 

(CONT.)

# 17. DUCTWORK

- A. ALL DUCTWORK, SHALL BE GALVANIZED STEEL AND SHALL BE CONSTRUCTED, INSTALLED, SEALED AND INSULATED AS PROVIDED IN CHAPTER 6 OF L.A. MECHANICAL
- SEAL ALL JOINTS DURING INSTALLATION WITH DURO DYNE S-2 SEALER/FIBERGLASS SYSTEM OR HARDCAST (DUCT TAPE IS NOT ACCEPTABLE).
- DUCT RUNS ARE SCHEMATIC IN THAT THEY DO NOT SHOW ALL OFFSETS AND SPECIAL FITTINGS REQUIRED FOR A COMPLETE INSTALLATION. EXACT LOCATIONS, OFFSETS AND AVAILABLE SPACE ARE TO BE CHECKED AND DETERMINED IN THE FIELD. CHANGES IN SIZE, REQUIRED TO MEET FIELD CONDITIONS, SHALL BE MADE USING THE EQUAL FRICTION METHOD.
- ALL DUCTWORK SHALL BE CONSTRUCTED, ERECTED, BRACED SUPPORTED AND TESTED IN ACCORDANCE WITH LATEST STANDARDS ADOPTED BY "SMACNA" AND SHALL COMPLY WITH THE STATE OF CALIFORNIA ENERGY CONSERVATION STANDARDS
- PROVIDE SHEET METAL FLASHINGS FOR DUCTS AND PIPES PASSING THROUGH ROOFS AND/OR OUTSIDES WALLS AND HOT MOP AND/OR SEAL AS REQUIRED FOR A WATER AND WEATHER TIGHT INSTALLATION.
- ALL BRANCH DUCT RUNS ARE TO HAVE VOLUME CONTROL DAMPERS WITH LOCKING QUADRANTS AND SHAFT BEARINGS, FOR BALANCING.
- G. ALL DUCT CONNECTIONS BETWEEN SUPPLY DIFFUSERS AND SUPPLY BRANCH DUCTS AND BETWEEN RETURN GRILLES AND RETURN BRANCH DUCTS SHALL BE MADE WITH LOW PRESSURE SHEET METAL DUCT.
- H. ALL CONCEALED SUPPLY AND RETURN DUCTS SHALL BE WRAPPED WITH ASTRO FOIL INSULATION, ONE INCH ON RETURN AND TWO INCHES ON SUPPLY, WIRED IN PLACE AT 18" O.C. MAXIMUM. INSULATION THICKNESS SHALL COMPLY WITH TITLE-24 AND TORRANCE UNIFORM MECHANICAL CODE REQUIREMENTS.
- FLEXIBLE VIBRATION—ISOLATION CONNECTORS, DUCT CONNECTORS AND DUCT TAPE TO BE APPROVED MATERIAL.
- DUCT WORK SHALL BE APPROVED BEFORE COVERING WITH INSULATION. 18. ALL NEW DUCT WORK DIMENSIONS ARE INSIDE CLEAR
- 19. ALL DUCT INSULATION SHALL MEET UL-181 CLASS AND NFPA 90A AND 90B, AND FLAME SPREAD AND SMOKE DENSITY FHC 25/50. THE USE OF INSULATION MATERIAL IS LIMITED TO THOSE THAT HAVE BEEN CERTIFIED TO THE CALIFORNIA ENERGY COMMISSION. FILTERS AND ADHESIVES SHALL COMPLY WITH SECTION 1103.
- 20. DUCTS SHALL BE COORDINATED WITH BUILDING CONDITIONS. CONTRACTOR SHALL ROUTE NEW DUCT WORK AS REQUIRED TO FIT EXISTING CONDITIONS.
- 21. FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS ARE TO BE PROVIDED AND INSTALLED AS REQUIRED BY CODE. STATE AND LOCAL FIRE MARSHALL. FIRE DAMPER AND COMBINATION SMOKE AND FIRE DAMPERS SHALL BE LISTED AND APPROVED BY STATE FIRE MARSHALL WITH PERMANENT IDENTIFICATION. PROVIDE ACCESS AS REQUIRED FOR INSPECTION AND SERVICE.
- 22. ALL CONCEALED SPACES USED TO CONVEY CIRCULATING AIR SUPPLY SHALL BE OF INCOMBUSTIBLE MATERIAL AND CONTAIN NO COMBUSTIBLE (INCLUDING EXPOSED COMMUNICATION CABLES).
- 23. ALL CONNECTIONS BETWEEN AC UNITS/FANS AND DUCTWORKS SHALL HAVE FIREPROOF, HEAVY DUTY FLEX-CONNECTIONS (CITY APPROVED) WITH THREE INCH MINIMUM CLEARANCE. ISOLATE ALL HVAC UNITS, FANS AND EQUIPMENT FROM THE BUILDING STRUCTURE WITH APPROVED ISOLATION MOUNTS. PROVIDE SEISMIC RESTRAINTS FOR ALL UNITS AS REQUIRED BY CODE.
- 24. ALL TRANSVERSE JOINTS ON ALL AIR SUPPLY DUCTS INSTALLED WHERE AIR LEAKAGE IS NONBENEFICIAL TO THE OCCUPIED AREAS TEMPERATURE REQUIREMENTS SHALL BE SEALED WITH MASTIC OR TAPE.
- 25. INSPECTION TO BE MADE AND DUCT WORK APPROVED BEFORE COVERING WITH INSULATION.
- 26. ALL APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE SECURELY FASTENED IN PLACE.
- 27. PROVIDE A 3/4" MAXIMUM TRAPPED CONDENSATE DRAIN FROM EACH UNIT AS SHOWN ON PLANS IF NOT SHOWN EXTEND FULL SIZE TO AN APPROVED RECEPTOR. MATERIAL - COPPER TYPE "M" WITH COPPER FITTING AND SOLDERED JOINTS.
- 28. ROOF MOUNTED EQUIPMENT, INCLUDING AIR INTAKES, SHALL BE LABELED AS TO THE SPACE IT SERVES.
- 29. REFRIGERATION SYSTEM TO BE LABELED TO COMPLY WITH LOCAL CODES.
- 30. ALL UNITS SHALL BE PROVIDED WITH FILTERS IN ACCORDANCE WITH MFGR'S RECOMMENDATION, WITH ACCESS AS REQUIRED.
- 31. THE CFMS INDICATED IN THE EQUIPMENT SCHEDULE ARE NOMINAL REFER TO THE FLOOR PLANS FOR REQUIRED CFMS FOR EACH UNIT.
- 32. PROVIDE VIBRATION ISOLATORS ON ALL MECHANICAL EQUIPMENT WITH MOVING PARTS. ALL VIBRATION ISOLATOR SHALL BE SPRING TYPE UNLESS INDICATED OTHERWISE.
- 33. REFER TO DIFFUSER AND GRILLE SCHEDULE FOR SIZES OF ALL NEW AIR DISTRIBUTION DEVICES AND RESPECTIVE BRANCH DUCT SIZES.
- 34. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND INTERIOR ELEVATION FOR EXACT LOCATION OF AIR DEVICES. ALL AIR DEVICES FRAME STYLES SHALL BE COMPATIBLE WITH CEILING IN WHICH IT IS LOCATED.

# 35. AIR DISTRIBUTION:

1. SIDEWALL SUPPLY OUTLETS SHALL BE DOUBLE DEFLECTION TYPE WITH KEY OPERATED OPPOSED BLADE DAMPERS (KRUEGER 5880). 2. EXHAUST REGISTERS SHALL BE SINGLE DEFLECTION WITH BLADES

GENERAL NOTES

FIXED AT A 25 DEG. ANGLE AND WITH KEY OPERATED OPPOSED BLADE DAMPERS (KRUEGER S580H)

(CONT.)

- 3. RETURN GRILL SHALL BE SINGLE DEFLECTION TYPE WITH BLADES FIXED AT A 35 DEG. ANGLE AND 1" FILTER FRAME (KRUGGER S585H-5FF).
- 4. ALL BALANCING DAMPERS MUST BE EQUIPPED WITH LOCKING QUADRANTS AND SHAFT BEARINGS.
- 5. FINISH TO BE OFF-WHITE BAKED ENAMEL 6. DUCTS AND PLENUMS BEHIND AND VISIBLE THROUGH AIR INLETS AND OUTLETS MUST BE PAINTED FLAT BLACK. AIR OUTLETS BEHIND PERFORATED FACE PANEL MUST BE PAINTED FLAT BLACK.
- **36. TESTING AND ADJUSTING:** 
  - A. EACH PIECE OF EQUIPMENT FOR THE SYSTEMS SHALL BE ADJUSTED AND READJUSTED TO INSURE PROPER FUNCTIONING OF ALL CONTROLS, PROPER DISTRIBUTION OF AIR, ELIMINATION OF DRAFTS, NOISE, AND VIBRATION, AND LEFT IN FIRST-CLASS OPERATING CONDITION. SUBJECT TO ARCHITECT'S APPROVAL
  - B. SUBMIT TO THE ARCHITECT SIX COPIES OF THE REPORT ON THE OPER-ATION , INCLUDING AIR QUANTITIES, FAN SPEEDS, PULLEY SIZES, MOTOR LOADS, "AS-BUILT" DRAWINGS, EQUIPMENT PAMPHLETS, AND ALL PERTINENT DATA, INCLUDING CONTROL DIAGRAMS AND MAINTENANCE BROCHURES.
- 37. THE REFRIGERANT PIPING OUTSIDE THE BUILDING AND BELOW GRADE SHALL BE INSTALLED INSIDE 3" ABS PIPE SLEEVE WITH BOTH ENDS SEALED. THE PIPE SLEEVE SHALL BE BURIED 24" BELOW GRADE.
- 38. ALL EQUIPMENT SHALL BE SEISMICALLY BRACED
- 39. ALL MECHANICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE FOLLOWING CRITERIA

a.FIXED EQUIPMENT ON GRADE.......33% OF OPERATING WEIGHT b.FIXED EQUIPMENT ON STRUCTURE.....50% OF OPERATING WEIGHT FOR FLEXIBLY MOUNTED EQUIPMENT USE TWO (2) TIMES THE ABOVE VALUES. FOR SIMULTANEOUS VERTICAL FORCE USE 1/3 TIMES THE HORIZONTAL FORCE. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND THE OSA FIELD **ENGINEER** 

40. ALL SEISMIC RESTRAINT SHALL BE AS REQUIRED BY THE CALIFORNIA ADMINISTRATIVE CODE, TITLE 24, DIVISION T22

# PLAN CHECK NOTES

- EACH HVAC SYSTEM SHALL BE EQUIPPED WITH AT LEAST ONE AUTO-MATIC DEVICE TO SETBACK OR SHUTOFF THE SYSTEM DURING PERIODS OF NON-USE OR ALTERNATE USE OF BUILDING SPACES OR ZONES SERVED BY THE SYSTEM. THERMOSTAT AND TIMER SHALL BE READILY ACCESSIBLE AND MANUALLY ADJUSTABLE. EXCEPTION: SMALL ANCILLARY HVAC SYSTEM WHOSE INPUT POWER IS LESS THAN 500 WATTS MAY HAVE READILY ACCESSIBLE
- MANUAL ON/OFF SWITCHING INSTEAD. 2. AUTOMATIC TEMPERATURE CONTROLS FOR HVAC SYSTEMS SHALL COMPLY WITH THE FOLLOWING
  - A) EACH ZONE SHALL BE PROVIDED WITH AT LEAST ONE AUTOMATIC TEMPERATURE CONTROL FOR THAT ZONE. EACH FLOOR OF A BUILDING WITH CONDITIONED SPACE SHALL CONTAIN AT LEAST
  - ONE ZONE. B) MAINTAIN SPACE TEMPERATURE SET POINTS FROM 55 F TO 85 F. C) OPERATE ZONE HEATING AND COOLING IN SEQUENCE IF BOTH ARE PROVIDED.
  - D) PROVIDE A TEMPERATURE RANGE ADJUSTABLE UP TO 5 F BETWEEN FULL HEATING AND FULL COOLING TO THE ZONE.
- 3. A MAINTENANCE LABEL SHALL BE AFFIXED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNERS USE. THE LABEL SHALL CLEARLY INDICATE THE ROUTINE MAINTENANCE ACTIONS WHICH MUST BE PERFORMED TO MAINTAIN THE EQUIPMENT IN EFFICIENT OPERATING CONDITION. OR INDICATE BY NUMBER WHICH MAINTENANCE OR OPERATIONS MANUALS EXPLAIN THE MAINTENANCE REQUIREMENTS IN GREATER DETAIL
- 4. ALL EQUIPMENT SHALL COMPLY WITH THE STATE OF CALIFORNIA ENERGY CONSERVATION STANDARDS. EQUIPMENT MANUFACTURER AND SUPPLIER SHALL PROVIDE ALL NECESSARY DATA FOR COMPLIANCE. PROVIDE COMPLIANCE CERTIFICATE WITH EQUIPMENT SUBMITTALS.
- 5. ALL DUCTWORK, INCLUDING INSULATION SHALL CONFORM TO CALIFORNIA MECHANICAL CODE T-24 AND CHAPTER 6 OF LOS ANGELES, MECHANICAL CODES LATEST EDITION.
- 6. DUCTS SUPPORTS AND ANCHORAGE SHALL COMPLY WITH CHAPTER 6 OF UMC. SHOW GAGE, SIZE, AND SPACING OF WIRE HANGERS, STRAPS, ANGLES. CHANNELS. ETC.
- 7. ALL UNITS SHALL MEET OR EXCEED CEC'S LATEST EER AND COP REQUIREMENTS.
- 8. BACKDRAFT DAMPERS TO BE INSTALLED ON ALL OUTSIDE AIR INTAKES. EXHAUST OUTLETS AND EXHAUST FANS.

# **ALTERATION WORK AND DEMOLITION NOTES**

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE EXISTING PROJECT SITE, ACQUAINT HIMSELF WITH ALL EXISTING CONDITIONS, AND ASCERTAIN THE EXTENT OF WORK INVOLVED IN REMOVING EXISTING EQUIPMENT AND INSTALLING NEW EQUIPMENT, DUCTWORK, AIR DISTRIBUTION DEVICES, PIPING CONTROLS, AND ALL OTHER APPURTENANCES PERTAINING TO THE ABOVE. HE SHALL PROVIDE ALL LABOR, MATERIALS, ETC. REQUIRED FOR THE COMPLETE NEW INSTALLATION, ALTERATIONS, ETC. FOR THE COMPLETION OF THE PROJECT. BY THE ACT OF SUBMITTING A BID, THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE SUCH AN EXAMINATION, TO HAVE ACCEPTED SUCH CONDITIONS, AND TO HAVE MADE ALLOWANCES THEREFORE IN PREPARING HIS FIGURE. WHERE INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL DISCONNECT THE EXISTING EQUIPMENT NOT TO BE USED USED FOR THE REHABILITATION OF THIS PROJECT, INCLUDING HEATING UNITS, VENTS, CONTROLS, PIPING, CONDUITS, SUPPORTS, ETC., PREPARING THE EXISTING ABOVE EQUIPMENT FOR REMOVAL

ALL MATERIALS, EQUIPMENT, PIPING, DUCTWORK, ETC., WHICH ARE TO BE REMOVED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS INDICATED OTHERWISE, AND SHALL BE REMOVED FROM THE SITE. WHERE SUCH MATERIALS, EQUIPMENT, ETC., ARE TO BE REMOVED, IT SHALL BE REMOVED, IT ITS ENTIRETY, FROM THE PREMISES, AND CARE TAKEN TO ENSURÉ THAT NO OPEN ENDS EXIST IN PIPING, DUCTWORK, ETC., WHICH REMAIN IN PLACE OR IN SERVICE. BLANKED OR OTHER APPROVED MEANS OF CLOSURE METHOD.

SYMBOL		
- <del>-</del>	&	DESCRIPTION
ABBREVIA	ATION	
$\overline{}$		MATCH LINE
$\overset{\circ}{\longrightarrow}$		EQUIPMENT DESIGNATION
-		DETAIL REFERENCE
$-\frac{\circ}{\diamond}$		NOTE REFERENCE
$-\overset{\vee}{\mathbf{\Omega}}$	P.0.C	POINT OF CONNECTION
OA. SA. R	A. EXH.	OUTSIDE AIR. SUPPLY. RETURN. EXHAUST
		SUPPLY AIR DUCT
		RA. OR OA. DUCT
		EXH. OR OA. DUCT
<u> </u>	<u> </u>	DUCT DROP IN DIRECTION OF AIR FLOW
<u>IR─</u> I} ⅓	<del></del>	DUCT RISE IN DIRECTION OF AIR FLOW
		DUCT
	<u> </u>	LINED DUCT
	<u> </u>	TURNING VANES
	그	TRANSITION
<u> </u>	111111113	FLEXIBLE DUCT
	<u> </u>	FLEXIBLE DUCT CONNECTION
	→ BD	BACKDRAFT DAMPER
	→ VD	VOLUME DAMPER
<u> </u>	<b>∃</b> ED	ELECTRICAL CONTROL DAMPER
+ 1	→ FD	FIRE DAMPER
	⇒ SFD	AUTOMATIC FIRE DAMPER (COMBINATION SMOKE & FIRE DAMPER)
	一 2.5 中	LOUVER (EX; 2.5中)
<del>U-</del>		UNDERCUT DOOR 3/4" ABOVE FINISHED FLOOR
	AD.AP.	ACCESS DOOR. ACCESS PANEL.
1	12 CD.	12x12 CEILING DIFFUSER. REGISTER. GRILLE ARROWS
	R.CG.	INDICATE THROW PATTERN.
'	12 TR.	
•	BR.BG.	12x12 TOP REGISTER. GRILLE. BOTTOM REGISTER. GRILLE.
'-0"x0'-6		10 FT. LENGTH x 6 IN. WIDTH LINEAR DIFFUSER, LINEAR GRILLE.
LVR.		LOUVER
CONT		
		CONTINUED, CONTINUATION
TYP.		TYPICAL
BEL.		BELOW
ABV.		ABOVE
<u>W/</u>		WITH
CFM		CUBIC FEET PER MINUTE
AFF		ABOVE FINISHED FLOOR
FS		FLOOR SINK
DN.		DOWN
EA.		EACH CTATIO DESCRIPE
S.P		STATIC PRESSURE
HP		HORSE POWER
BHP		BRAKE HORSE POWER
V-ø		VOLT-PHASE
RPM		REVOLUTIONS PER MINUTE
FPM		FEET PER MINUTE
%EFI		EFFICIENCY (%)
CD-		CONDENSATE DRAIN (INDIRECT)
RL		REFRIGERANT LIQUID
RS		REFRIGERANT SUCTION
TC		TOE KICK
RR		RETURN REGISTER
SWR		SIDE WALL REGISTER
SWK		FLOOR SILL
FS		UP THRU ROOF
FS UTR		
FS UTR		THERMOSTAT
FS UTR		THERMOSTAT YOUNG REGULATORS
FS UTR		YOUNG REGULATORS
FS UTR	M	YOUNG REGULATORS  ECHANICAL
FS UTR	M	YOUNG REGULATORS
FS UTR ①	M	YOUNG REGULATORS  ECHANICAL
FS UTR ① ②	MI	YOUNG REGULATORS  ECHANICAL  NG SHEET INDEX
FS UTR (T) (S)-	DRAWIN	YOUNG REGULATORS  ECHANICAL  NG SHEET INDEX  DESCRIPTION
FS UTR (T) (S) MEET NO. M0-1 M0-2	DRAWINGENERAL NOT	YOUNG REGULATORS  ECHANICAL  NG SHEET INDEX  DESCRIPTION TES, LEGEND AND SHEET INDEX
FS UTR (T) (EET NO. MO-1 MO-2 M1-1	DRAWINGENERAL NOT	YOUNG REGULATORS  ECHANICAL  NG SHEET INDEX  DESCRIPTION  TES, LEGEND AND SHEET INDEX  EQUIPMENT SCHEDULES  DEMOLITION PLAN
FS UTR (T) (EET NO.) M0-1 M0-2 M1-1 M2-2	DRAWIN  GENERAL NOT  MECHANICAL  MECHANICAL	YOUNG REGULATORS  ECHANICAL  NG SHEET INDEX  DESCRIPTION  TES, LEGEND AND SHEET INDEX  EQUIPMENT SCHEDULES  DEMOLITION PLAN  PLAN
FS UTR (T) (EET NO.) M0-1 M0-2 M1-1 M2-2 M5-1	DRAWIN  GENERAL NOT  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL	YOUNG REGULATORS  ECHANICAL  NG SHEET INDEX  DESCRIPTION  TES, LEGEND AND SHEET INDEX  EQUIPMENT SCHEDULES  DEMOLITION PLAN  PLAN  DETAILS
FS UTR (T) (EET NO.) MO-1 MO-2 M1-1 M2-2 M5-1 M5-2	DRAWIN  GENERAL NOT  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL	YOUNG REGULATORS  ECHANICAL  NG SHEET INDEX  DESCRIPTION  TES, LEGEND AND SHEET INDEX  EQUIPMENT SCHEDULES  DEMOLITION PLAN  PLAN  DETAILS  DETAILS
FS UTR (T) (EET NO.) M0-1 M0-2 M1-1 M2-2 M5-1 M5-2 M5-3	DRAWIN  GENERAL NOT  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL	YOUNG REGULATORS  ECHANICAL  NG SHEET INDEX  DESCRIPTION TES, LEGEND AND SHEET INDEX EQUIPMENT SCHEDULES  DEMOLITION PLAN PLAN DETAILS DETAILS DETAILS
FS UTR (T) (S) HEET NO. MO-1 MO-2 M1-1 M2-2 M5-1 M5-2 M5-3	DRAWIN  GENERAL NOT  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL	YOUNG REGULATORS  ECHANICAL  NG SHEET INDEX  DESCRIPTION  TES, LEGEND AND SHEET INDEX  EQUIPMENT SCHEDULES  DEMOLITION PLAN  PLAN  DETAILS  DETAILS
FS UTR (T) (EET NO.) M0-1 M0-2 M1-1 M2-2 M5-1 M5-2 M5-3	DRAWIN  GENERAL NOT  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL	YOUNG REGULATORS  ECHANICAL  NG SHEET INDEX  DESCRIPTION TES, LEGEND AND SHEET INDEX EQUIPMENT SCHEDULES  DEMOLITION PLAN PLAN DETAILS DETAILS DETAILS
FS UTR (T) (EET NO. M0-1 M0-2 M1-1 M2-2 M5-1 M5-2 M5-3	DRAWIN  GENERAL NOT  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL	YOUNG REGULATORS  ECHANICAL  NG SHEET INDEX  DESCRIPTION TES, LEGEND AND SHEET INDEX EQUIPMENT SCHEDULES  DEMOLITION PLAN PLAN DETAILS DETAILS DETAILS
FS UTR (T) (EET NO. M0-1 M0-2 M1-1 M2-2 M5-1 M5-2 M5-3	DRAWIN  GENERAL NOT  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL  MECHANICAL	YOUNG REGULATORS  ECHANICAL  NG SHEET INDEX  DESCRIPTION TES, LEGEND AND SHEET INDEX EQUIPMENT SCHEDULES  DEMOLITION PLAN PLAN DETAILS DETAILS DETAILS

MECHANICAL LEGEND

# NO OXD HIE( califorr 2 9 WILLIAM 23 ven **KHALIFEH**

**8 ASSOCIATES, INC** 



TION ARD 905 PRANCE

PARTMEN

PARTMEN

MEN'S RESTROOM

KER ROOM RENO

TORRANCE BOU

RANCE, CALIFOR

GENERAL LEGEND, A Issue

Copyright 2004 26.SEP.14 Date Drawn Checked Scale AS NOTED Job. No.

	OPE MANDATORY MEASURES: NONRESIDENTIAL	ENV-MN
Project Name	GE POLICE DEPT (ALTERATION)	Date 11/21/2014
DESCRI		15. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10
Building E	Envelope Measures:	
§110.8(a):	Installed insulating material shall have been certified by the manufacturer to comply with the Calif Standards for insulating material, Title 20 Chapter 4, Article 3.	fornia Quality
§110.8(c):	All Insulating Materials shall be installed in compliance with the flame spread rating and smoke descriptions 2602 and 707 of Title 24, Part 2.	ensity requirements of
§110.8(f):	The opaque portions of framed demising walls in nonresidential buildings shall have insulation wi of no less than R-13 between framing members.	th an installed R-value
§110.7(a):	All Exterior Joints and openings in the building that are observable sources of air leakage shall be weatherstripped or otherwise sealed.	
§110.6(a):	Manufactured fenestration products and exterior doors shall have air infiltration rates not exceedi window area, 0.3 cfm/ft.² of door area for residential doors, 0.3 cfm/ft.² of door area for nonreside (swinging and sliding), and 1.0 cfm/ft.² for nonresidential double doors (swinging).	
§110.6(a):	Fenestration U-factor shall be rated in accordance with NFRC 100, or the applicable default U-fac	ctor.
§110.6(a):	Fenestration SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fene applicable default SHGC.	stration, or the
§110.6(b):	Site Constructed Doors, Windows and Skylights shall be caulked between the unit and the buildir weatherstripped (except for unframed glass doors and fire doors).	ng, and shall be

Project Name			Date
TORRANCE POLICE DEPT (ALTERATION) Project Address	Climate Zon	20	Total Cond. Floor Area Addition Floor
3300 TORRACE BLVD. TORRANCE	The Control of the Co	ate Zone 06	1,010 1,010
GENERAL INFORMATION	140		· ·
Building Type:   Nonresidential	-	ise Residential	☐ Hotel/Motel Guest Room
Phase of Construction:	☐ specific ☐ Additio	c climate zone	<ul><li>□ all climates</li><li>☑ Alteration</li></ul>
STATEMENT OF COMPLIANCE			Attoration
This certificate of compliance lists the building feature			
comply with Title 24, Parts 1 and 6 of the California Co	요즘 사람이 살다고 하지만 그리다면 아니다를 되었다면 되었다.		
certificate applies only to a Building using the performa- The documentation author hereby certifies that the do			pomploto
Documentation Author	cumentation is	accurate and c	ompete.
Name SOODY KHALIFEH		Signature	1
Company Khalifeh & Associates. Inc.	-	L.	Date 11/21/2014
Address 13465 BEACH AVE., SUITE B			Phone 310-305-1555
City/State/Zip MARINA DEL REY, CA 90292			
efficiency requirements contained in sections 110.0, 1 Please check one:  ENV. LTG. MECH.  I hereby affirm that I am eligible u	under the provision	ons of Division 3	of the Business and Professions Code
California as a civil engineer, med I affirm that I am eligible under the	chanical enginee	er, electrical engin	
	ument as the per		usiness and Professions Code by secti for its preparation; and that I am a licer
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 6	ivision 3 of the B or type of work	rson responsible usiness and Profe	
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 65  Principal Envelope Designer	ivision 3 of the B or type of work	rson responsible usiness and Profedescribed as exer	for its preparation; and that I am a licer essions Code to sign this document
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 60  Principal Envelope Designer  Name	ivision 3 of the B or type of work	rson responsible usiness and Profe	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 6:  Principal Envelope Designer  Name  Company WILLIAM LOYD JONES ARCHITECT	ivision 3 of the B or type of work	rson responsible usiness and Profedescribed as exer	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 65  Principal Envelope Designer  Name  Company WILLIAM LOYD JONES ARCHITECT  Address 723 OCEANFRONT WALK	ivision 3 of the B or type of work	rson responsible usiness and Profedescribed as exer	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi  Date  License #
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 6.  Principal Envelope Designer  Name  Company WILLIAM LOYD JONES ARCHITECT  Address 723 OCEANFRONT WALK	ivision 3 of the B or type of work	rson responsible usiness and Profedescribed as exer	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 6.  Principal Envelope Designer  Name  Company WILLIAM LOYD JONES ARCHITECT  Address 723 OCEANFRONT WALK  City/State/Zip VENICE, CA 90291  Principal Mechanical Designer	ivision 3 of the B or type of work	rson responsible usiness and Profescribed as exer	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi  Date  License #
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 67  Principal Envelope Designer  Name  Company WILLIAM LOYD JONES ARCHITECT  Address 723 OCEANFRONT WALK  City/State/Zip VENICE, CA 90291  Principal Mechanical Designer  Name	ivision 3 of the B or type of work	rson responsible usiness and Profedescribed as exer	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi  Date  License #  Phone 310-392-3995
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 6.  Principal Envelope Designer  Name  Company WILLIAM LOYD JONES ARCHITECT  Address 723 OCEANFRONT WALK  City/State/Zip VENICE, CA 90291  Principal Mechanical Designer  Name  Company KHALIFEH & ASSOCIATES, INC.	ivision 3 of the B or type of work	rson responsible usiness and Profedescribed as exer	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi  Date License # Phone 310-392-3995  Date
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 67  Principal Envelope Designer  Name  Company WILLIAM LOYD JONES ARCHITECT  Address 723 OCEANFRONT WALK  City/State/Zip VENICE, CA 90291  Principal Mechanical Designer  Name  Company KHALIFEH & ASSOCIATES, INC.  Address 13465 BEACH AVE., SUITE B	ivision 3 of the B or type of work	rson responsible usiness and Profedescribed as exer	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi  Date License # Phone 310-392-3995  Date License #
contractor performing this work.  I affirm that I am eligible under Director because it pertains to a structure Code Sections 5537, 5538 and 6.  Principal Envelope Designer  Name  Company WILLIAM LOYD JONES ARCHITECT  Address 723 OCEANFRONT WALK  City/State/Zip VENICE, CA 90291  Principal Mechanical Designer  Name  Company KHALIFEH & ASSOCIATES, INC.  Address 13465 BEACH AVE., SUITE B  City/State/Zip MARINA DEL REY, CA 90292  Principal Lighting Designer	ivision 3 of the B or type of work of 737.1.	rson responsible usiness and Profidescribed as exer Signature	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi  Date License # Phone 310-392-3995  Date License #
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 67  Principal Envelope Designer Name  Company WILLIAM LOYD JONES ARCHITECT  Address 723 OCEANFRONT WALK  City/State/Zip VENICE, CA 90291  Principal Mechanical Designer Name  Company KHALIFEH & ASSOCIATES, INC.  Address 13465 BEACH AVE., SUITE B  City/State/Zip MARINA DEL REY, CA 90292  Principal Lighting Designer Name  Company Lighting Compliance Not In The Scope Of This Sub-Address	ivision 3 of the B or type of work of 737.1.	rson responsible usiness and Profidescribed as exer Signature	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi  Date License # Phone 310-392-3995  Date License # Phone 310-305-1555  Date License #
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 6:  Principal Envelope Designer Name  Company WILLIAM LOYD JONES ARCHITECT  Address 723 OCEANFRONT WALK  City/State/Zip VENICE, CA 90291  Principal Mechanical Designer Name  Company KHALIFEH & ASSOCIATES, INC.  Address 13465 BEACH AVE., SUITE B  City/State/Zip MARINA DEL REY, CA 90292  Principal Lighting Designer Name  Company Lighting Compliance Not In The Scope Of This Subsection Address  City/State/Zip Lighting Compliance Not In The Scope Of This Subsection Address  City/State/Zip	ivision 3 of the B or type of work of 737.1.	rson responsible usiness and Profidescribed as exer Signature Signature	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi  Date License # Phone 310-392-3995  Date License # Phone 310-305-1555  Date License # Phone Phone
contractor performing this work.  I affirm that I am eligible under Director because it pertains to a structure Code Sections 5537, 5538 and 67  Principal Envelope Designer  Name  Company WILLIAM LOYD JONES ARCHITECT  Address 723 OCEANFRONT WALK  City/State/Zip VENICE, CA 90291  Principal Mechanical Designer  Name  Company KHALIFEH & ASSOCIATES, INC.  Address 13465 BEACH AVE., SUITE B  City/State/Zip MARINA DEL REY, CA 90292  Principal Lighting Designer  Name  Company Lighting Compliance Not In The Scope Of This Sub Address  City/State/Zip  INSTRUCTIONS TO APPLICANT COMPLIANCE & WORK	ivision 3 of the B or type of work of 737.1.	rson responsible usiness and Profidescribed as exer Signature  Signature  Signature	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi  Date License # Phone 310-392-3995  Date License # Phone 310-305-1555  Date License # Phone and
contractor performing this work.  I affirm that I am eligible under Dibecause it pertains to a structure Code Sections 5537, 5538 and 6:  Principal Envelope Designer Name  Company WILLIAM LOYD JONES ARCHITECT  Address 723 OCEANFRONT WALK  City/State/Zip VENICE, CA 90291  Principal Mechanical Designer Name  Company KHALIFEH & ASSOCIATES, INC.  Address 13465 BEACH AVE., SUITE B  City/State/Zip MARINA DEL REY, CA 90292  Principal Lighting Designer Name  Company Lighting Compliance Not In The Scope Of This Subsection Address  City/State/Zip Lighting Compliance Not In The Scope Of This Subsection Address  City/State/Zip	ivision 3 of the B or type of work of 737.1.	rson responsible usiness and Profi described as exer Signature  Signature  Signature  k box if workshe Certificate of HVAC Air/W Mechanical V	for its preparation; and that I am a licer essions Code to sign this document mpt pursuant to Business and Professi  Date License # Phone 310-392-3995  Date License # Phone 310-305-1555  Date License # Phone Phone

- D. When new or replacement space-conditioning ducts are installed to serve an existing building, the new ducts shall meet the requirements of Section 124, and if they meet the criteria of Sections 144(k)1, 2, and 3, the duct system shall be sealed and labeled as confirmed through field verification and diagnostic testing in accordance with procedures for duct sealing of existing duct systems as specified in the Reference Nonresidential Appendix NA2, to meet one of the following requirements:
- i. If the new ducts form an entirely new duct system directly connected to the air handler, the measured duct leakage shall be no more than 6 percent of fan flow; or
- ii. If the new ducts are an extension of an existing duct system, the combined new and existing duct system shall meet one of the following requirements:
- a. The measured duct leakage shall be less than 15 percent of fan flow; or
- The duct leakage shall be reduced by more than 60 percent relative to the leakage prior to the
  equipment having been replaced and a visual inspection shall demonstrate that all accessible leaks have
  been sealed; or
- c. If it is not possible to meet the duct sealing requirements of subsection a or b, all accessible leaks shall be sealed and verified through a visual inspection by a certified HERS rater.

			NEW	VAV BO	SCHE	DULE (	SING	LE DI	JCT	TERMII	NAL U	JNIT)
<b>44DOI</b>	MAKE &	SERVICE	LOCATION	T/OF	CFM RANGE	(DESIGN)	STAT	IC PRESS	URE	NC	LEVEL	- REMARKS
MBOL	MODEL	SERVICE	LOCATION	TYPE	MAX	MIN	INLET	DOWN	MIN.	RAD.	DISCH.	REMARKS
VAV 1A VAV	TITUS PESV-06	LOCKER ROOM (37 LOCKERS)	LOCKER ROOM (37 LOCKERS)	SINGLE DUCT TERMINAL	350	200	1	0.25	0.1	22	20	SINGLE DUCT WITH ATTENTUATOR FIBER FREE LINING, TITUS 11A, RA/NO PNEUMATIC CONTROLLER, JOHNSON T4002-302 RA PNEUMATIC THERMOSTAT.
VAV 1B	TITUS PESV-05	WOMEN'S RESTROOM	WOMEN'S RESTROOM	SINGLE DUCT TERMINAL	120	70	1	0.25	0.01	10	13	SINGLE DUCT WITH ATTENTUATOR FIBER FREE LINING, TITUS 11A, RA/NO PNEUMATIC CONTROLLER, JOHNSON T4002-302 RA PNEUMATIC THERMOSTAT.
1B VAV 1C	TITUS PESV-06	LOCKER ROOM (15 LOCKERS)	LOCKER ROOM (15 LOCKERS)	SINGLE DUCT TERMINAL	180	120	1	0.25	.03	13	10	SINGLE DUCT WITH ATTENTUATOR FIBER FREE LINING, TITUS 11A, RA/NO PNEUMATIC CONTROLLER, JOHNSON T4002-302 RA PNEUMATIC THERMOSTAT.

	DUCT S	IZING T	ABLE	
ROUND DUCT (IN.)	RECTANGULAR DUCT (IN.)	CFM RANGE	FRICTION LOSS /100 FT. (IN.)	VELOCITY FPM
6	6x5, 8x4 10x5, 6x6	0-100	0.08	500
7	12x4, 10x5 7x6, 7x7	101-150	0.08	560
8	12x5, 10x6 8x7, 8x8	151-200	0.08	600
9	12x6, 10x7 9x8, 9x9	201-280	0.08	650
10	16x6, 12x8 10x9, 10x10	281-380	0.08	700
12	24x6, 16x8 12x10, 12x12	381-600	0.08	750
14	34x6, 24x8 18x10, 14x12	601-900	0.08	850
16	30x8, 24x10 18x12, 16x14	901-1300	0.08	950
18	28x10, 24x12 20x14, 18x16	1301-1750	0.08	1000
20	28x12, 24x14 22x16, 18x18	1751-2200	0.07	1000
22	36x12, 30x14 22x18, 20x20	2201-2600	0.06	1000
24	44x12, 36x14, 26x18, 22,22	2601-3100	0.06	1000

- 1. DUCT SIZE SHALL BE BASED ON THIS TABLE UNLESS NOTED
- OTHERWISE IN THE PLAN.
- 2. CONTRACTOR TO USE THE APPROPRIATE DUCT SIZE THAT WILL ACCOMMODATE DUCT CROSS OVER AND FIT WITHIN CEILING SPACE.

DUCT UPSTREAM OF VAV INLET SHALL BE SIZED BASED ON THIS
TABLE THEN TRANSITION TO VAV INLET CONNECTION. PROVIDE MIN.
OF 3X DIAMETER OF STRAIGHT DUCT SECTION BEFORE THE INLET
CONNECTION.

CEILING DIFFUSERS	CEILING DIFFUSERS	SIDEWALL RETURN AND EXHAUST REGISTERS	CEILING RETURN AND EXHAUST REGISTERS
TAG ("KRUEGER" MODEL 1240P)  AIR FLOW SETTING (CFM)	TAG ("KRUEGER" MODEL 1240) AIR FLOW SETTING (CFM)	(A)(100)—"KRUEGER" MODEL S580 SET @ 100 CFM (0 DEG. DEFL.)	(A)(100)—"KRUEGER" MODEL 1190 SET @ 100 CFM
TAG SIZE/RANGE TAG SIZE/RANGE	TAG SIZE/RANGE TAG SIZE/RANGE	TAG SIZE/RANGE TAG SIZE/RANGE	TAG SIZE/RANGE TAG SIZE/RANGE
6" x 6" 6 16" x 16" 410-500 CFM	6" x 6" (CD6) 16" x 16" (660-800 CFM)	(A) 18" x 6" (F) 24" x 18" 1000 CFM	1 6" x 6" 6 16" x 16" 660-800 CF
8" x 8" 110-165 CFM 7 18" x 18" 510-640 CFM	8" x 8" 130-220 CFM CD7 18" x 18" 810-950 CFM	B 18" x 10" G 24" x 24" 1200 CFM	② 8" x 8" 7 18" x 18" 810-950 CF
3 10" x 10" 8 20" x 20" 650-850 CFM	CD3 10" x 10" CD8 20" x 20" 960-1100 CFM	© 16" x 12" H 30" x 24" 2000 CFM	3 10" x 10" 8 20" x 20" 160-350 CFM 8 960-1100 C
12" x 12" 250-300 CFM	CD4 12" x 12" CD9 22" x 22" 1110-1300 CFM	(D) 24" x 10" (1) 36" x 30" 3500 CFM	4 12" x 12" 9 22" x 22" 1110-1600 C
5 14" x 14" 310-400 CFM	THE STATE OF THE S	(E) 30" x 12" (J) 36" x 16" 1250 CFM	5 14" x 14" 510-650 CFM
NOTE: FOR T-BAR CEILING WITH OVERALL DIMENSION OF 24"x24".	NOTE: FOR HARD GYPSUM CEILING APPLICATION.	NOTE: FOR HARD GYPSUM CEILING APPLICATION. MODEL S580 H5FF W/1" THK. FILTER, HINGE, KNURLED KNOB AND CHAIN.	NOTE: FOR T-BAR CEILING WITH OVERALL DIMENSION OF 24"x24".
RS SHALL BE 4-WAY MODULAR CORE UNLES	SS OTHERWISE NOTED.	<u>,                                      </u>	
ES LOCATED ABOVE NON—ACCESSIBLE CEILIN E OPERATOR VOLUME DAMPER. THE REGULA EGISTERS OR GRILLES.	IG SHALL BE PROVIDED TOR SHALL BE OPERATED		
	A TAG ("KRUEGER" MODEL 1240P)  TAG SIZE/RANGE TAG SIZE/RANGE  1 6" x 6" 6 16" x 16" 410-500 CFM  2 8" x 8" 7 18" x 18" 510-640 CFM  3 10" x 10" 8 20" x 20" 650-850 CFM  4 12" x 12" 250-300 CFM  5 14" x 14" 310-400 CFM  NOTE: FOR T-BAR CEILING WITH OVERALL DIMENSION OF 24"x24".  SS SHALL BE 4-WAY MODULAR CORE UNLESS SOPERATOR VOLUME DAMPER. THE REGULA	TAG ("KRUEGER" MODEL 1240P)	CEILING DIFFUSERS  CEILING DIFFUSERS  CEILING DIFFUSERS  EXHAUST REGISTERS  (A)(100)—"RRUGEGR" MODEL 1240P)  DATE FLOW SETTING (CFM)  TAG SIZE/RANGE TAG SIZE/RANGE  (A)(100)—"RRUGEGR" MODEL 1240P)  DATE FLOW SETTING (CFM)  TAG SIZE/RANGE TAG SIZE/RANGE  (A)(100)—"RRUGEGR" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  TAG SIZE/RANGE  TAG SIZE/RANGE  (A)(100)—"RRUGEGR" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  TAG SIZE/RANGE  TAG SIZE/RANGE  TAG SIZE/RANGE  (A)(100)—"RRUGEGR" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  TAG SIZE/RANGE  TAG SIZE/RANGE  TAG SIZE/RANGE  (A)(100)—"RRUGEGR" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  TAG SIZE/RANGE  TAG SIZE/RANGE  (A)(100)—"RRUGEGR" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  TAG SIZE/RANGE  TAG SIZE/RANGE  (A)(100)—"RRUGEGR" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  TAG SIZE/RANGE  TAG SIZE/RANGE  (A)(100)—"RRUGEGR" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  TAG SIZE/RANGE  TAG SIZE/RANGE  TAG SIZE/RANGE  (A)(100)—"RRUGEGR" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  TAG SIZE/RANGE  TAG SIZE/RANGE  (A)(100)—"RRUGER" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  TAG SIZE/RANGE  (A)(100)—"RRUGER" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  TAG SIZE/RANGE  (A)(100)—"RRUGER" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  TAG SIZE/RANGE  (A)(100)—"RRUGER" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  TAG SIZE/RANGE  (A)(100)—"RRUGER" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  (A)(100)—"RRUGER" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  (A)(100)—"RRUGER" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  (A)(100)—"RRUGER" MODEL SS80  SET © 100 CFM (0 DEG. DEFL.)  TAG SIZE/RANGE  (A)(100)—"RRUGER"  (A)(100)—"

& ASSOCIATES, INC. consulting engineers KHALIFEH & ASSOCIATES, INC. 13465 BEACH AVE., SUITE B TEL: (310) 305-1555 MARINA DEL REY, CA 90292 FAX: (310) 305-1550 www.khalifehassociates.com CHEDULES **MECHANICAL** 

Drawn

Scale

26.SEP.14

AS NOTED

CERT	RCC-ENV-01-E (F											OALII ORIV	A ENERGY COMMISSION  NRCC-ENV-0
220,612,012	lope Compon												(Page 1 c
			ICE DEPT (	AI TEDAT	ION)					Dat	e Piepared: 🚜	/21/2014	(i ugc 1 c
	IOIUG	NOL FOL	JOE DEL 1 (	AL I LIVA I	ION)							12 112014	
	ENERAL INF		Ņ					Terror	7110			000.0000	2000 Harris N. 1920 T.
1	Project Locatio	on:	3300 TORI	RACE BL	VD.		6	Com	pliance Method:			☑ Component	Unconditioned (file
2	CA City and Zip	Lode.	TORRANG	F 90503	R155600		7	Build	ling Front Orienta	tion (deg or c		0 dea	
	Climate Zone:	Louci	6	L, obou	2		8	1100,000	nitted Scope of W		STATE OF THE PARTY	on Addition I	☑ Alteration
SALES	Total Condition Area:	ned Floor	1,010				9	_	ling Type(s)				☐ Hotel/Motel Guest Ro
B. Er	NVELOPE DE	TAILS – Fr 2	amed 3	4	5	6		7	8	9		10	11
Tag	/ID Amo	mbly Type	Frame Material	Frame Depth	Frame Spacing	Appendix . Reference		Cavity R-value	Continuous Insulation R-value	Proposed U-Factor		U-Factor From les, B, C. D	Comments
		W 1001											
SET OF THE	VVELOPE DE	TA OTA-OD											
1		2	3	-	4	5	б		7	8	-	9	10
Tag/	<sup>r</sup> ID Assen	nbly Type	Assembly N	<b>V</b> isterials	Thickness (inches)	Interior or Core Insulation R-value	Contin Insula R-val	tion	Appendix IA4 Reference	Proposed U-Factor		l U-Factor from les, B, C, D	Comments
			A										
D. E	NVELOPE DE	TAILS – M	ass				*	-		NO.	14.00		-
1	2	3	i.	4	5	6	7		8	9	9	10	11
	Mass	Den:	sity T	Mass h ckness (inches)	Furring Strip Thickness (inches)	Interior Insulation R-value	Exteri Insulat R-vali	tion	Appendix IA4 Reference	Proposed Insulation U-factor		U-Factor from les, B, C. D	Comments
Tag/	I I I I I	(107		manear	find real	13.0	0.0		4.3.5-A10	0.241	1 1 1 1 1	10-25-05-05-05	8" CMU Wall/W R1

CERTIFICAT	VV-01-E (Revised TE OF COMPL								311,130,000	DRN A ENERGY COMMISSION  NRCC-ENV-01-
	Component A									(Page 2 of 4
Project Name: =	TORRANCE	POLICE DEPT	(ALTERATIO	N)				Date Piepa	ed: 11/21/2014	
. ROOFII	NG PRODUC	TS (COOL ROO	F)	(v)		p.1	,		744	
1	2	3	4	5	6	7	8	9	10	11
Aass Roof				11240-719-12-110-110-110-110-110-110-110-110-110-	Proposed	2		inimum Require	1	
25 lb ft2 or greater	Roof Pitch	CRRC Product ID Number	Product Type	Aged Solar Reflectance	Thermal Emittance	SRI <sup>2</sup> (Optional)	Aged Solar Reflectance	Thermal Emittance	SRI (optional)	Comments
	noor mich	io (valinoci	riodade i ype		CHIRCHIGE	(Optional)	(reflectation	Linkanac	(optional)	acimicino.
	1					ž.			+	
		<u>.</u>			+	4			+ +	
	2000						Section 19	CONT. A COMMISSION		
0	solar reflectan	ce less than 0.63 is	s allowed provided		n roof / ceiling U	factor in TABLI	: 140.3 is not exce	eded		
□ I An aged I High-rise	e residential bu	ildings and Hotels	s allowed provided and Motels with h	□¹ I the maximu					ed Solar	
An aged High-rise	e residential bu and emittance	ildings and Hotels requirements.	and Motels with l	□¹ If the maximum ow-sloped roo	fs in Climate Zon	es 1 through 8,	12 and 16 are exe	empted from ag		
An aged High-rise seflectance High-rise	e residential bu and emittance	ildings and Hotels requirements.	V	□¹ If the maximum ow-sloped roo	fs in Climate Zon	es 1 through 8,	12 and 16 are exe	empted from ag		
An aged High-rise effectance High-rise mittance r	e residential bu and emittance e residential bu equirements. f area covered l	ildings and Hotels requirements. ildings and Hotels by building integra	and Motels with l	☐¹ I the maximul ow-sloped roo iteep-sloped r	fs in Climate Zon	es 1 through 8, ones 1 and 16 a	12 and 16 are exer re exempt from a	empted from ag ged Solar Ref ec	tance and	
An aged High-rise seflectance High-rise mittance r The roof nd emittan	e residential bu and emittance e residential bu equirements. farea covered l nce requiremen	ildings and Hotels requirements. ildings and Hotels by building integra its	and Motels with lo and Motels with s ted photovoltaic p	d the maximul ow-sloped root teep-sloped r	fs in Climate Zon oofs in Climate Zo ding integrated	es 1 through 8, ones 1 and 16 a solar thermal p	12 and 16 are exe re exempt from a anels are exempt i	empted from ag ged Solar Refec from aged So ar	tance and Reflectance	
An aged High-rise eflectance High-rise mittance r The roof nd emittar o apply Liq	e residential bu and emittance e residential bu equirements. Farea covered l nce requiremen pud Field Appli	ildings and Hotels requirements. ildings and Hotels by building integra its ed Coatings, the c	and Motels with lo	d the maximul ow-sloped roo steep-sloped r	fs in Climate Zon oofs in Climate Zo ding integrated s ne entire roof sur	es 1 through 8, ones 1 and 16 a solar thermal p face and meet	12 and 16 are exer re exempt from a anels are exempt in the dry mil thickn	empted from agr ged Solar Ref ec from aged So ar ess or coverage	tance and Reflectance	
An aged High-rise seflectance High-rise mittance r The roof nd emittan to apply Liq y the coati	e residential bu and emittance e residential bu equirements. area covered l ace requiremen uid Field Appli ings manufactu	ildings and Hotels requirements. ildings and Hotels by building integra its ed Coatings, the c	and Motels with la and Motels with s ted photovoltaic p toating must be ap mum performance	d the maximul ow-sloped roo steep-sloped r	fs in Climate Zon oofs in Climate Zo ding integrated : he entire roof sur s listed in §110.8	es 1 through 8, ones 1 and 16 a solar thermal p face and meet (i)4. Select the	12 and 16 are exer re exempt from a anels are exempt in the dry mil thickn	empted from agr ged Solar Ref ec from aged So ar ess or coverage	tance and Reflectance	
An aged High-rise deflectance High-rise mittance r The roof nd emittan to apply Liq y the coati	e residential bu and emittance e residential bu equirements. area covered l ace requiremen uid Field Appli ings manufactu	ildings and Hotels requirements. ildings and Hotels by building integra ts ed Coatings, the c rer and meet mini	and Motels with la and Motels with s ted photovoltaic p toating must be ap mum performance	d the maximul ow-sloped roo steep-sloped r onels and bui	fs in Climate Zon oofs in Climate Zo ding integrated : he entire roof sur s listed in §110.8	es 1 through 8, ones 1 and 16 a solar thermal p face and meet (i)4. Select the	12 and 16 are exer re exempt from a anels are exempt in the dry mil thickn	empted from agr ged Solar Ref ec from aged So ar ess or coverage	tance and Reflectance	
An aged High-rise eflectance High-rise mittance r The roof nd emittan o apply Liq y the coati Aluminun	e residential bu and emittance e residential bu equirements. farea covered la nce requiremen puid Field Appli ings manufactu m-Pigmented A	ildings and Hotels requirements. ildings and Hotels by building integrates ed Coatings, the crer and meet mini sphalt. Roof Coatil	and Motels with land Motels with stated photovoltaic protein growth grow	ow-sloped rootsteep-sloped rootsteep-slo	fs in Climate Zon ofs in Climate Zo ding integrated : he entire roof sur s listed in §110.8 ting    Other	es 1 through 8, ones 1 and 16 a solar thermal p face and meet (i)4. Select the	12 and 16 are exempt from a anels are exempt from the dry mil thickn applicable coating	empted from ag ged Solar Refect from aged So ar ess or coverage g:	Reflectance recommended	)2 where the <i>Initial Reflectance</i>
An aged High-rise effectance High-rise mittance r The roof nd emittar o apply Liq y the coati Aluminur IOTES: L. Check the value fro	e residential but and emittance e residential but equirements. Farea covered lance requirement puid Field Applings manufactum-Pigmented Applings of the again of the same differential but the same diff	ildings and Hotels requirements. ildings and Hotels by building integrates ed Coatings, the crer and meet mini sphalt Roof Coatings and John Coatings and Jo	and Motels with land Motels with sated photovoltaic proteins must be approximate performancing   Cement-Base was not available equation (0.2+the)	ow-sloped root teep-sloped root panels and built plied across the requirement teased Roof Colle in the Cool of the in the Cool of the cool	fs in Climate Zon ofs in Climate Zo ding integrated : he entire roof sur is listed in §110.8 ting	es 1 through 8, ones 1 and 16 a solar thermal place and meet (i) 4. Select the site of the safe's Rated Producted aged value	12 and 16 are exerce exempt from a cones are exempt the dry mil thickn applicable coating and the dry mil thickness and the dry mil thickness and the dry mil thickness are exercised.	empted from agreed Solar Reflect from aged Solar ession coverage g: nuse the lequat	Reflectance recommended ion in Section 110.8(	)2 where the Initial Reflectance er set to 0.65 for Field-Applied
An aged High-rise effectance High-rise mittance r The roof nd emittar o apply Liq y the coati Aluminur IOTES: L. Check th value fro Coatings	e residential but and emittance e residential but equirements. Farea covered lance requirement puid Field Appliings manufactum-Pigmented Appliance box if the again the same dissert it is set to 0	ildings and Hotels requirements. ildings and Hotels by building integrates ed Coatings, the crer and meet mini sphalt Roof Coatings and use to the crectory and use to the coating of the creed of the coating and use to the coating and use the coating and use to the coating an	and Motels with a and Motels with stated photovoltaic products of the appropriate of the period of the appropriate of the appro	ow-sloped root teep-sloped root panels and built plied across the requirement teased Roof Colle in the Cool of the root of the	fs in Climate Zon ofs in Climate Zo ding integrated : he entire roof sur is listed in §110.8 ting	es 1 through 8, ones 1 and 16 a solar thermal p face and meet (i) 4. Select the dif's Rated Producted aged value	12 and 16 are exempt from a anels are exempt if the dry mil thickn applicable coating and the dry mil thickn. The coating are the first the dry mil thickn applicable coating are the first the dry mil the first the dry mil	empted from age ged Solar Ref ec from aged Solar ess or coverage g: nuse the equat initial Solar Refle	Reflectance recommended ion in Section 110.8(ectance and <b>B</b> is either	er set to 0.65 for Field-Applied
An aged High-rise effectance High-rise mittance r Hithrop The roof nd emittar o apply Liq y the coati Aluminur IOTES: Check the value fro Coatings	e residential but and emittance e residential but equirements. Farea covered lance requirement puid Field Appliings manufactum-Pigmented Appliance box if the again the same dissert it is set to 0	ildings and Hotels requirements. ildings and Hotels by building integrates ed Coatings, the crer and meet mini sphalt Roof Coatings and use to the crectory and use to the coating of the creed of the coating and use to the coating and use the coating and use to the coating an	and Motels with a and Motels with stated photovoltaic products of the appropriate of the period of the appropriate of the appro	ow-sloped root teep-sloped root panels and built plied across the requirement teased Roof Colle in the Cool of the root of the	fs in Climate Zon ofs in Climate Zo ding integrated : he entire roof sur is listed in §110.8 ting	es 1 through 8, ones 1 and 16 a solar thermal p face and meet (i) 4. Select the dif's Rated Producted aged value	12 and 16 are exempt from a anels are exempt if the dry mil thickn applicable coating and the dry mil thickn. The coating are the first the dry mil thickn applicable coating are the first the dry mil the first the dry mil	empted from age ged Solar Ref ec from aged Solar ess or coverage g: nuse the equat initial Solar Refle	Reflectance recommended ion in Section 110.8(ectance and <b>B</b> is either	
An aged I High-rise effectance I High-rise mittance r I The roof nd emittan o apply Liq y the coati I Aluminur OTES: . Check th value fro Coatings	e residential but and emittance e residential but equirements. Farea covered lance requirement puid Field Appliings manufactum-Pigmented Appliance box if the again the same dissert it is set to 0	ildings and Hotels requirements. ildings and Hotels by building integrates ed Coatings, the crer and meet mini sphalt Roof Coatings and use to the crectory and use to the coating of the creed of the coating and use to the coating and use the coating and use to the coating an	and Motels with a and Motels with stated photovoltaic products of the appropriate of the period of the appropriate of the appro	ow-sloped root teep-sloped root panels and built plied across the requirement teased Roof Colle in the Cool of the root of the	fs in Climate Zon ofs in Climate Zo ding integrated : he entire roof sur is listed in §110.8 ting	es 1 through 8, ones 1 and 16 a solar thermal p face and meet (i) 4. Select the dif's Rated Producted aged value	12 and 16 are exempt from a anels are exempt if the dry mil thickn applicable coating and the dry mil thickn. The coating are the first the dry mil thickn applicable coating are the first the dry mil the first the dry mil	empted from age ged Solar Ref ec from aged Solar ess or coverage g: nuse the equat initial Solar Refle	Reflectance recommended ion in Section 110.8(ectance and <b>B</b> is either	er set to 0.65 for Field-Applied
An aged I High-rise effectance I High-rise mittance ri I Hor roof nd emittan o apply Liq y the coati I Aluminur OTES: . Check th value fro Coatings . Calculate	e residential but and emittance e residential but equirements. If area covered ince requirement puid Field Applitings manufactum-Pigmented Appliting the box if the agreement of the same discounties are to ce the SRI Value	ildings and Hotels requirements. ildings and Hotels by building integrates ed Coatings, the crer and meet mini sphalt Roof Coatings and use to the crectory and use to the coating of the creed of the coating and use to the coating and use the coating and use to the coating an	and Motels with a and Motels with stated photovoltaic products of the appropriate of the period of the appropriate of the appro	ow-sloped root teep-sloped root panels and built plied across the requirement teased Roof Colle in the Cool of the root of the	fs in Climate Zon ofs in Climate Zo ding integrated : he entire roof sur is listed in §110.8 ting	es 1 through 8, ones 1 and 16 a solar thermal p face and meet (i) 4. Select the dif's Rated Producted aged value	12 and 16 are exempt from a anels are exempt if the dry mil thickn applicable coating and the dry mil thickn. The coating are the first the dry mil thickn applicable coating are the first the dry mil the first the dry mil	empted from age ged Solar Ref ec from aged Solar ess or coverage g: nuse the equat initial Solar Refle	Reflectance recommended ion in Section 110.8(ectance and <b>B</b> is either	er set to 0.65 for Field-Applied
I An aged I High-rise eflectance I High-rise mittance ri I The roof nd emittan o apply Liq y the coati I Aluminur IOTES: Check th value fro Coatings Calculate	e residential bu and emittance e residential bu equirements. farea covered la nce requirement guid Field Appli ings manufactu m-Pigmented A ne box if the ago om the same di s or it is set to to e the SRI Value	ildings and Hotels requirements. ildings and Hotels by building integrates ed Coatings, the crer and meet mini sphalt Roof Coatings and use to the crectory and use to the coating of the creed of the coating and use to the coating and use the coating and use to the coating an	and Motels with a and Motels with stated photovoltaic products of the appropriate of the period of the appropriate of the appro	ow-sloped root teep-sloped root panels and built plied across the requirement teased Roof Colle in the Cool of the root of the	fs in Climate Zon pofs in Climate Zon ding integrated : the entire roof sur is listed in §110.8 thing Other Toof Rating Coun- to obtain a calcula Applied Coating.	es 1 through 8, ones 1 and 16 a solar thermal p face and meet (i) 4. Select the dif's Rated Producted aged value	12 and 16 are exempt from a anels are exempt if the dry mil thickn applicable coating and the dry mil thickn. The coating are the first the dry mil thickn applicable coating are the first the dry mil the first the dry mil	empted from age ged Solar Ref ec from aged Solar ess or coverage g: nuse the equat initial Solar Refle	Reflectance recommended ion in Section 110.8(ectance and <b>B</b> is either	er set to 0.65 for Field-Applied
An aged High-rise teflectance High-rise mittance r The roof apply Liq by the coati Aluminur NOTES: Coatings Coatings Coatculate	e residential bu and emittance e residential bu equirements. i area covered i nce requiremen quid Field Appli ings manufactu m-Pigmented A ne box if the agi om the same di s or it is set to 0 e the SRI Value  rier	Ildings and Hotels requirements. Ildings and Hotels by building integrals to get Coatings, the crer and meet mini sphalt Roof Coatings Shalt Roof Coatings and use tile 1.70 for all other roby using the SRI-V	and Motels with Is and Motels with Is and Motels with Is ted photovoltaic protection of the period of the period of the Europe o	ow-sloped root teep-sloped root teep-slo	fs in Climate Zon oofs in Climate Zo ding integrated : the entire roof sur is listed in §110.8 thing	es 1 through 8, ones 1 and 16 a solar thermal p face and meet (i) 4. Select the cil's Rated Prod ated aged value in the SRI Colum	12 and 16 are exempt from a anels are exempt if the dry mil thickn applicable coating and the dry mil thickn. The coating are the first the dry mil thickn applicable coating are the first the dry mil the first the dry mil	empted from age ged Solar Ref ec from aged Solar ess or coverage g: nuse the equat initial Solar Refle	Reflectance recommended ion in Section 110.8( ectance and B is either	er set to 0.65 for Field-Applied

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

CERTIFICA	TE OF COMPLIANCE										NRCC-ENV
Envelope (	Component Approach										(Page 3
Project Name:	TORRANCE POLICE DEPT	(ALTERATI	ON)				7	Date Piepared:	11/21/20	)14	100
	200 (200 (200 (200 (200 (200 (200 (200	•	1300 Ammandi ya C							2008	
G. FENES	TRATION PROPOSED AREAS	AND EFFIC	IENCIES		967	2	0				
1	2	3	4	5	6	7	8	9	10	11	12
	1/2		Orientation				2				1000
SWIENU BOOK	_ 1951-2-1950/1-1450-1-1450-1-150/1-15	1.00000000	N, 5, W, E	# of	Max	1878170070317000-	Max	Min	1.0000000	Conditions	V AT AT EXTENSION DESCRIPTION OF
Tag/ID	Fenestrat on Type	Area	or Roof	Panes	U-Factor	Overhang	(R)SHGC	VT	Label	Status	Comments
		_						_			
										ľ	
						÷				î i	
							ć	782		i i	
		+			+	× =				<del> </del>	
					-	*				k	
Indicate lo	DE MANDATORY MEASURES cation on building plans of Man				54 104	10 JO	30				
Indicate lo		COMPLIANO	CE & WORKSHE	ETS (check	box if workshe		10	npliance M	anual.		
Indicate lo INSTRUCTI For detailed	cation on building plans of Man IONS TO APPLICANT ENVELOPE Instructions on the use of this and	<b>COMPLIANO</b> all Energy Effi	CE & WORKSHE	ETS (check	box if workshe	refer to the Nonr	10	npliance Ma	anual.		
Indicate lo INSTRUCTI For detailed	cation on building plans of Man  ONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of	COMPLIANO all Energy Effi	CE & WORKSHE ciency Standards e. Recuired on	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	ins.
Indicate lo  INSTRUCTI  For detailed	cation on building plans of Man  ONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of	COMPLIANO all Energy Effi	CE & WORKSHE ciency Standards e. Recuired on	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	ins.
Indicate lo  INSTRUCTI  For detailed	cation on building plans of Man  ONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of	COMPLIANO all Energy Effi	CE & WORKSHE ciency Standards e. Recuired on	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	ins.
Indicate lo  INSTRUCTI  For detailed	cation on building plans of Man  ONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of	COMPLIANO all Energy Effi	CE & WORKSHE ciency Standards e. Recuired on	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	ins.
Indicate lo  INSTRUCTI  For detailed	cation on building plans of Man  ONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of	COMPLIANO all Energy Effi	CE & WORKSHE ciency Standards e. Recuired on	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	ins.
Indicate lo  INSTRUCTI  For detailed	cation on building plans of Man  ONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of	COMPLIANO all Energy Effi	CE & WORKSHE ciency Standards e. Recuired on	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	ins.
Indicate lo  INSTRUCTI  For detailed	cation on building plans of Man  ONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of	COMPLIANO all Energy Effi	CE & WORKSHE ciency Standards e. Recuired on	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	ins.
Indicate lo  INSTRUCTI  For detailed	cation on building plans of Man  ONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of	COMPLIANO all Energy Effi	CE & WORKSHE ciency Standards e. Recuired on	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	ins.
Indicate lo  INSTRUCTI  For detailed	cation on building plans of Man  ONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of	COMPLIANO all Energy Effi	CE & WORKSHE ciency Standards e. Recuired on	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	ins.
Indicate lo INSTRUCTI For detailed	cation on building plans of Man  IONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of NRCC-ENV-04-E Use when m	COMPLIANO all Energy Effi of Complianc ninimum skyl	CE & WORKSHE  ciency Standards  e. Recuired on  light requirement	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	
Indicate lo INSTRUCTI For detailed	cation on building plans of Man  ONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of	COMPLIANO all Energy Effi of Complianc ninimum skyl	CE & WORKSHE  ciency Standards  e. Recuired on  light requirement	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	ins.
Indicate lo INSTRUCTI For detailed	cation on building plans of Man  IONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of NRCC-ENV-04-E Use when m	COMPLIANO all Energy Effi of Complianc ninimum skyl	CE & WORKSHE  ciency Standards  e. Recuired on  light requirement	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	
Indicate lo INSTRUCTI For detailed	cation on building plans of Man  IONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of NRCC-ENV-04-E Use when m	COMPLIANO all Energy Effi of Complianc ninimum skyl	CE & WORKSHE  ciency Standards  e. Recuired on  light requirement	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	
Indicate lo INSTRUCTI For detailed	cation on building plans of Man  IONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of NRCC-ENV-04-E Use when m	COMPLIANO all Energy Effi of Complianc ninimum skyl	CE & WORKSHE  ciency Standards  e. Recuired on  light requirement	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	
Indicate lo INSTRUCTI For detailed	cation on building plans of Man  IONS TO APPLICANT ENVELOPE  Instructions on the use of this and  NRCC-ENV-01-E Certificate of NRCC-ENV-04-E Use when m	COMPLIANO all Energy Effi of Complianc ninimum skyl	CE & WORKSHE  ciency Standards  e. Recuired on  light requirement	ETS (check compliance plans for a	box if workshe forms, please: Il submittals.	refer to the Nonr	residential Co	NAME OF THE PARTY	- 44 00 000	. Optional on pla	

STATE OF CALIF	ORNIA										
MECHANI	CAL	SYSTEMS									INTERNATION OF THE PARTY OF THE
CEC-NRCC-MCH									CAL	IFORNIA ENERGY (	
CERTIFICATE	-1-6401717100-EN	AND LAND REPORTED									NRCC-MCI
Mechanical :	PENCET STATE	Control of the second of the s	T (ALTEDAT	ION				Date Prepared	- ANDARANA		(Page
Logicianic II	UKKAN	ICE POLICE DEP	I (ALTERAT	ION)					11/21/2014		
nan Caabaan aan gaan yaa sa sa						Searches (making the					
MECHANICAI	L COMP	LIANCE FORMS & V	ORKSHEETS (	check box if w	orksheet is inc	luded)					
For detailed in	nstructi	ons on the use of th	is and all Ener	gy Efficiency Si	andards compl	iance forms, ref	er to the 2013 I	Vonresidential N	1anual		
Note: The En	forceme	ent Agency may req	uire all forms i	ro be incorpord	ted onto the bu	ıilding plans.					
YES	NO	Form/Worksheet	ŧ	Title							
◩		NRCC-MCH-01-E (I	Part 1 of 3)	-		eclaration. Requ					
		NRCC-MCH-01-E (I	Part 2 of 3)	The state of the s		17-34-340-11-12-12-22-22-22-22-22-22-12-12-12-12-	A. A	*** *** *** *** *** *** *** *** *** **	A COLOR DE LA COLO	s for all submitt	
☑		NRCC-MCH-01-E (I	Part 3 of 3)		The state of the s	THE REAL PROPERTY OF THE PROPE	A CONTRACT OF THE PARTY OF THE	The second secon		s where applica	22111111111111111111111111111111111111
☑		NRCC-MCH-02-E (I								. It is optional o	
☑	La	NRCC-MCH-02-E (I	Part 2 of 2)	100			uired for all sub	mittals with chi	lled water, hot	water or conder	iser water
ゼ											
		NDCC MCH CO.E			optional on pla	1,000		and the section of the	1		\$4000 KG 4404
		NRCC-MCH-03-E		Mechanical V	entilation and I	1,000	ed for all submi	ttals with multip	ple zone heating	g and cooling sys	tems. It i
		NRCC-MCH-03-E			entilation and I	1,000	ed for all submi	ttals with multip	ple zone heating	g and cooling sys	tems. It is
	10000	NRCC-MCH-03-E  ACCEPTANCE FOR	IMS (check bo	Mechanical V optional on p	entilation and I lans.	1,000	ed for all submi	ttals with multip	ple zone heating	g and cooling sys	tems. It i
	10000		MS (check bo	Mechanical V optional on p	entilation and I lans.	1,000	ed for all submi	ttals with multip	ple zone heating	g and cooling sys	tems. It i
MECHANICA Designer: This form is to	<b>AL HVA</b>	ACCEPTANCE FOR	attached to the	Mechanical V optional on p ox for required plans. Listed be	entilation and I lans. forms)	Reheat is requir	HVAC systems.	The designer is rec	quired to check th	e applicable boxe:	s for all
MECHANICA Designer: This form is to	<b>AL HVA</b>	ACCEPTANCE FOR	attached to the	Mechanical V optional on p ox for required plans. Listed be	entilation and I lans. forms)	Reheat is requir	HVAC systems.	The designer is rec	quired to check th	e applicable boxe:	s for all
MECHANICA Designer: This form is to acceptance te	AL HVAC o be used ests that	ACCEPTANCE FOR	attached to the	Mechanical V optional on p ox for required plans. Listed be	entilation and I lans. forms)	Reheat is requir	HVAC systems.	The designer is rec	quired to check th	e applicable boxe:	s for all
MECHANICA Designer: This form is to acceptance te Installing Con	o be used ests that ntractor: or who in	E ACCEPTANCE FOR I by the designer and a apply and list all equipmen	attached to the oment that requ	Mechanical voor portional on portional on portional on portional on portional or required plans. Listed between an acceptaint of either conductory of the co	entilation and I lans.  forms)  low are all the accept test. All equip	Reheat is requir  ceptance tests for ment of the same	HVAC systems. type that requir	The designer is rec es a test, list the e entity run the tes	quired to check th quipment descrip t for them. If moi	e applicable boxe tion and the numi re than one perso	s for all per of syster n has
MECHANICA Designer: This form is to acceptance te Installing Con	o be used ests that ntractor: or who in	: ACCEPTANCE FOR I by the designer and a apply and list all equip	attached to the oment that requ	Mechanical voor portional on portional on portional on portional on portional or required plans. Listed between an acceptaint of either conductory of the co	entilation and I lans.  forms)  low are all the accept test. All equip	Reheat is requir  ceptance tests for ment of the same	HVAC systems. type that requir	The designer is rec es a test, list the e entity run the tes	quired to check th quipment descrip t for them. If moi	e applicable boxe tion and the numi re than one perso	s for all per of syster n has
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility	AL HVAC o be used ests that htractor: or who in	ACCEPTANCE FOR  I by the designer and is apply and list all equiports all equiports and the equipment acceptance testing, ea	attached to the oment that requ	Mechanical voor portional on portional on portional on portional on portional or required plans. Listed between an acceptaint of either conductory of the co	entilation and I lans.  forms)  low are all the accept test. All equip	Reheat is requir  ceptance tests for ment of the same	HVAC systems. type that requir	The designer is rec es a test, list the e entity run the tes	quired to check th quipment descrip t for them. If moi	e applicable boxe tion and the numi re than one perso	s for all ber of syster n has
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility Enforcement	AL HVAC o be used ests that ntractor: or who in for the a	ACCEPTANCE FOR  I by the designer and is apply and list all equiports all equiports and the equipment acceptance testing, ea	ettached to the oment that requ t is responsible ch person shall	Mechanical voor portional on prox for required plans. Listed be dires an acceptant to either conducting and submit	entilation and I lans.  forms)  low are all the acceptest. All equip  at the acceptance the Certificate of	ceptance tests for ment of the same test them self or Acceptance appl	HVAC systems. type that requir have a qualified cable to the por	The designer is rec es a test, list the e entity run the tes tion of the constr	quired to check th quipment descrip t for them. If moi uction or installat	e applicable boxe: tion and the numi re than one perso ion for which they	s for all ber of syster n has
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility Enforcement Plancheck - T	AL HVAC o be used ests that ntractor: or who in for the a Agency:	ACCEPTANCE FOR I by the designer and a apply and list all equipant stalled the equipmen acceptance testing, ea	rttached to the oment that required to is responsible chiperson shall	Mechanical voor portional on prox for required plans. Listed be dires an acceptant to either conducting and submit to completed form of the completed form	entilation and I lans.  forms)  forms are all the acceptance test. All equip  at the acceptance the Certificate of	ceptance tests for ment of the same test them self or Accepted by the bu	HVAC systems. type that requir have a qualified cable to the por	The designer is rec es a test, list the e entity run the tes tion of the constr	quired to check th quipment descrip t for them. If moi uction or installat	e applicable boxe: tion and the numi re than one perso ion for which they	s for all ber of syster n has
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility Enforcement Plancheck – T Inspector - Be	AL HVAC o be used ests that ntractor: or who in for the a Agency:	ACCEPTANCE FOR  I by the designer and is apply and list all equipostalled the equipment acceptance testing, each and the company permit is gramman acceptance permit is gramman acceptance permit is gramman acceptance.	rttached to the oment that required to is responsible chiperson shall	Mechanical voor portional on prox for required plans. Listed be dires an acceptant to either conducting and submit to completed form of the completed form	entilation and I lans.  forms)  forms are all the acceptance test. All equip  at the acceptance the Certificate of	ceptance tests for ment of the same test them self or Accepted by the bu	HVAC systems. type that requir have a qualified cable to the por	The designer is rec es a test, list the e entity run the tes tion of the constr	quired to check th quipment descrip t for them. If moi uction or installat	e applicable boxe: tion and the numi re than one perso ion for which they	s for all ber of syster n has r are respon
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility Enforcement Plancheck - Tourspector - Be Test Designers	AL HVAC o be used ests that intractor: or who in for the a Agency: The NRCC efore occurs	ACCEPTANCE FOR  I by the designer and apply and list all equipments acceptance testing, eacceptance testing, eacceptancy permit is grant MCH-01-E form is no upancy permit is grant MCH-02A of Outdoor	attached to the oment that required to see the considered as a considered as a considered as a considered as all newly instituted in the considered as a consi	Mechanical voluments on processing and submit sompleted form of talled process symmetry.	forms)  forms and I the acceptance the acceptance the Certificate of the acseptance and is not to be a stems must be to MCH-OSA Economizer	ceptance tests for ment of the same of the same of Acceptance applicated by the busted to ensure promoted Demand	HVAC systems. type that requir have a qualified icable to the por liding departmer oper operations. MCH-07A Supply Fan	The designer is recess a test, list the eentity run the testion of the construction of the corresponding the corresponding to the corre	quired to check th quipment descrip t for them. If moi uction or installat ct boxes are check MCH-09A Supply Water	e applicable boxe: tion and the numi re than one perso ion for which they ked. MCH-10A Hydronic	s for all ber of syster in has are respon MCH-1 Automa
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility Enforcement Plancheck - T. Inspector - Be Test Des Equipment Requiring Tes	AL HVAC o be used ests that intractor: or who in for the a Agency: The NRCC efore occurs scription	ACCEPTANCE FOR  by the designer and apply and list all equip  stalled the equipmen acceptance testing, ea  -MCH-01-E form is no upancy permit is grant	rttached to the oment that required to see the characteristic considered a considered at the considere	Mechanical voluments of the control	entilation and I lans.  forms)  fow are all the acted test. All equip  at the acceptance the Certificate of and is not to be a stems must be to MCH-OSA	ceptance tests for ment of the same test them self or f Acceptance appl ccepted by the bu ested to ensure pr MCH-06A Demand Control	HVAC systems. type that requir have a qualified cable to the por fiding departmer oper operations. MCH-07A	The designer is recess a test, list the eentity run the testion of the construction of the corre	quired to check the quipment descrip t for them. If mou uction or installate to boxes are check MCH-D9A	e applicable boxe: tion and the numl re than one perso ion for which they ked.  MCH-10A Hydronic System	s for all ber of syster n has are respon MCH-1 Automa Demand
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility Enforcement Plancheck - Tourspector - Be Test Designers	AL HVAC o be used ests that intractor: or who in for the a Agency: The NRCC efore occurs scription	ACCEPTANCE FOR  I by the designer and apply and list all equipments acceptance testing, eacceptance testing, eacceptancy permit is grant MCH-01-E form is no upancy permit is grant MCH-02A of Outdoor	attached to the oment that required to see the considered as a considered as a considered as a considered as all newly instituted in the considered as all newly instituted as a considered as all newly instituted as a considered as all newly instituted as a considered as	Mechanical voluments on processing and submit sompleted form of talled process symmetry.	forms)  forms and I the acceptance the acceptance the Certificate of the acseptance and is not to be a stems must be to MCH-OSA Economizer	ceptance tests for ment of the same test them self or f Acceptance applicated by the bursted to ensure proceed by the bursted to ensure proceed to ensure proceed to ensure proceed to ensure processed to ens	HVAC systems. type that requir have a qualified icable to the por liding departmer oper operations. MCH-07A Supply Fan	The designer is recess a test, list the eentity run the testion of the construction of the corresponding the corresponding to the corre	quired to check th quipment descrip t for them. If moi uction or installat ct boxes are check MCH-09A Supply Water	e applicable boxe: tion and the numi re than one perso ion for which they ked. MCH-10A Hydronic System Variable Flow	s for all ber of syster in has are respon MCH-1 Automa
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility Enforcement Plancheck - T. Inspector - Be Test Des Equipment Requiring Tes	AL HVAC o be used ests that intractor: or who in for the a Agency: The NRCC efore occurs scription	ACCEPTANCE FOR  I by the designer and apply and list all equipments acceptance testing, eacceptance testing, eacceptancy permit is grant MCH-01-E form is no upancy permit is grant MCH-02A of Outdoor	attached to the oment that required to see the considered as a considered as a considered as a considered as all newly instituted in the considered as all newly instituted as a considered as all newly instituted as a considered as all newly instituted as a considered as	Mechanical voluments of the control	forms)  forms and I the acceptance the acceptance the Certificate of the acseptance and is not to be a stems must be to MCH-OSA Economizer	ceptance tests for ment of the same test them self or f Acceptance appl ccepted by the bu ested to ensure pr MCH-06A Demand Control	HVAC systems. type that requir have a qualified icable to the por liding departmer oper operations. MCH-07A Supply Fan	The designer is recess a test, list the eentity run the testion of the construction of the corresponding the corresponding to the corre	quired to check th quipment descrip t for them. If moi uction or installat ct boxes are check MCH-09A Supply Water	e applicable boxe: tion and the numl re than one perso ion for which they ked.  MCH-10A Hydronic System	s for all ber of syster n has are respon MCH-1 Automa Demand
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility Enforcement Plancheck - T. Inspector - Be Test Des Equipment Requiring Tes	AL HVAC o be used ests that intractor: or who in for the a Agency: The NRCC efore occurs scription	ACCEPTANCE FOR  I by the designer and apply and list all equip  stalled the equipment acceptance testing, each  -MCH-01-E form is not apparaty permit is grant  MCH-02A  of Outdoor  nits Air	t is responsible ch person shall to considered a deed all newly ins MCH-03A Single Zone Unitary	Mechanical voluments of the control	forms)  forms)  forms)  forms)  forms are all the acceptance test. All equiports the acceptance the Certificate or and is not to be a stems must be to MCH-05A  Economizer Controls	ceptance tests for ment of the same stest them self or f Acceptance applicated by the bussed to ensure proceed by the bussed to ensure proceed and Control Ventilation (DCV)	HVAC systems. type that requir have a qualified icable to the por diding departmer oper operations. MCH-07A Supply Fan VAV	The designer is recess a test, list the eentity run the testion of the construct unless the corre	quired to check th quipment descrip t for them. If mor uction or installat ct boxes are check MCH-D9A Supply Water Temp. Reset	e applicable boxestion and the number than one persoion for which they ked.  MCH-10A Hydronic System Variable Flow Control	of or all over of syster on has or are respon MCH-1 Automa Demand Contro
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility Enforcement Plancheck - T. Inspector - Be Test Des Equipment Requiring Tes	AL HVAC o be used ests that intractor: or who in for the a Agency: The NRCC efore occurs scription	ACCEPTANCE FOR  I by the designer and apply and list all equip  stalled the equipment acceptance testing, ear  -MCH-01-E form is no upancy permit is grant  MCH-02A  of Outdoor  nits Air	attached to the oment that require t is responsible chiperson shall to considered a considered at all newly insigned MCH-03A  Single Zone Unitary	Mechanical voluments of the completed form o	entilation and I lans.  forms)  fow are all the acceptance test. All equip  at the acceptance the Certificate of the Certificat	ceptance tests for ment of the same test them self or f Acceptance appl cepted by the buested to ensure pr MCH-06A Demand Control Ventilation (DCV)	HVAC systems. type that requir have a qualified cable to the por dding departmer oper operations. MCH-07A Supply Fan VAV	The designer is reases a test, list the e entity run the tes tion of the constr at unless the corre MCH-DBA Valve Leakage Test	quired to check th quipment descrip t for them. If moi uction or installat at boxes are check MCH-09A Supply Water Temp. Reset	e applicable boxestion and the number of the	s for all ber of syster n has are respon  MCH-1 Automa Demand Contro
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility Enforcement Plancheck - T. Inspector - Be Test Des Equipment Requiring Tes	AL HVAC o be used ests that intractor: or who in for the a Agency: The NRCC efore occurs scription	SACCEPTANCE FOR  If by the designer and is apply and list all equipments acceptance testing, each of the same of t	attached to the oment that requires t is responsible chiperson shall to considered a considered at the	Mechanical voluments of the control	entilation and I lans.  forms)  forms all the acceptance the Certificate of the Certifica	ceptance tests for ment of the same of the same of the same of the same of Acceptance applicate the same of Accepted by the businessed to ensure production (DCV)	HVAC systems. type that requir have a qualified cable to the por idding departmer oper operations. MCH-07A Supply Fan VAV	The designer is recess a test, list the elentity run the testion of the construction of the corresponding to the c	quired to check the quipment descrip t for them. If more uction or installated boxes are checked boxes are checked boxes. MCH-D9A Supply Water Temp. Reset	e applicable boxe: tion and the numi re than one perso ion for which they ked.  MCH-10A Hydronic System Variable Flow Control	of or all ber of system n has n are respon  MCH-1 Automa Demand Contra
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility Enforcement Plancheck - T. Inspector - Be Test Des Equipment Requiring Tes	AL HVAC o be used ests that intractor: or who in for the a Agency: The NRCC efore occurs scription	ACCEPTANCE FOR  I by the designer and is apply and list all equipments acceptance testing, early and the equipment of the equipment of the equipment of the equipment of the equipment is grant of the equipment of the equipment is grant of the equipment	t is responsible chiperson shall to considered a died all newly insimulating Unitary	Mechanical voluments of the state of the sta	entilation and I lans.  forms)  low are all the acceptance test. All equip  at the acceptance the Certificate of the Certificat	ceptance tests for ment of the same test them self or f Acceptance applicated by the bursted to ensure a MCH-06A  Demand Control Ventilation (DCV)	HVAC systems. type that requir have a qualified cable to the por lding departmer oper operations. MCH-07A Supply Fan VAV	The designer is recess a test, list the elentity run the testion of the construction of the corresponding to the c	guired to check the quipment descrip to them. If more uction or installated boxes are check MCH-09A Supply Water Temp. Reset	e applicable boxe: tion and the numi re than one perso ion for which they ked.  MCH-10A Hydronic System Variable Flow Control	s for all ber of syster in has r are respon  MCH-1  Automa  Demand  Contr
MECHANICA Designer: This form is to acceptance te Installing Con The contractor responsibility Enforcement Plancheck - T. Inspector - Be Test Des Equipment Requiring Tes	AL HVAC o be used ests that intractor: or who in for the a Agency: The NRCC efore occurs scription	SACCEPTANCE FOR  If by the designer and is apply and list all equipments acceptance testing, each of the same of t	attached to the oment that requires t is responsible chiperson shall to considered a considered at the	Mechanical voluments of the control	entilation and I lans.  forms)  forms all the acceptance the Certificate of the Certifica	ceptance tests for ment of the same of the same of the same of the same of Acceptance applicate the same of Accepted by the businessed to ensure production (DCV)	HVAC systems. type that requir have a qualified cable to the por idding departmer oper operations. MCH-07A Supply Fan VAV	The designer is recess a test, list the elentity run the testion of the construction of the corresponding to the c	quired to check the quipment descrip t for them. If more uction or installated boxes are checked boxes are checked boxes. MCH-D9A Supply Water Temp. Reset	e applicable boxe: tion and the numi re than one perso ion for which they ked.  MCH-10A Hydronic System Variable Flow Control	s for all ber of syster n has are respon  MCH-1 Autom: Demand Contr

MECHANICA DEC-NRGC-MCH-01-E							CALIFORNIA ENERG	Y COMMISSION
CERTIFICATE OF	COMPLIAN	ICE						NRCC-MCH
Mechanical Syste	250M 2					at activity to the table of the table of the table of the table of		(Page 2
Project Name: TORF	ANCE P	OLICE DEPT (ALT	ERATION)			Date Prepared: 11/	21/2014	
MECHANICAI HI	/AC ACCE	PTANCE FORMS (che	ck box for required fo	rmsi				
The following tests	사람 ( 다양생생님, 사람이 보다						or installation for which t	0000 100 5350 TO 100 TO THE FEBRUARY
Enforcement Ager Plancheck – The Ni	i <b>cy:</b> RCC-MCH-0		red a completed form and wly installed process systi			nt unless the correct boxe	es are checked.	
Enforcement Ager Plancheck – The Ni	i <b>cy:</b> RCC-MCH-0 occupancy						es are checked.  MCH-17A	MCH-18A
Enforcement Ager Plancheck – The Ni Inspector - Before Test Descript Equipment Requiring Testing	i <b>cy:</b> RCC-MCH-0 occupancy	permit is granted all ne	wly installed process syst	ems must be tested to en	sure proper operations		STATE OF THE STATE OF	MCH-18A ECMS
Enforcement Ager Plancheck – The Ni Inspector - Before Test Descript Equipment Requiring Testing	ncy: RCC-MCH-0 occupancy tion # of	permit is granted all ne MCH-12A Fault Detection & Diagnostics for DX	wly installed process syst.  MCH-13A  Automatic Fault  Detection &  Diagnostics for Air &	ems must be tested to en MCH-14A Distributed Energy Storage DX AC	sure proper operations MCH-15A Thermal Energy Storage (TES)	MCH-16A Supply Air Temperature Reset	MCH-17A Condenser Water	1170 1771 1771 1771
Enforcement Ager Plancheck – The Ni Inspector - Before Test Descript Equipment Requiring Testing	ncy: RCC-MCH-0 occupancy tion # of	permit is granted all ne MCH-12A Fault Detection & Diagnostics for DX Units	wly installed process syst.  MCH-13A  Automatic Fault  Detection &  Diagnostics for Air &  Zone	ems must be tested to en MCH-14A Distributed Energy Storage DX AC Systems	sure proper operations MCH-15A Thermal Energy Storage (TES) Systems	MCH-16A Supply Air Temperature Reset Controls	MCH-17A Condenser Water Reset Controls	ECMS
Enforcement Ager Plancheck – The Ni Inspector - Before Test Descript Equipment Requiring Testing	ncy: RCC-MCH-0 occupancy tion # of	permit is granted all ne MCH-12A Fault Detection & Diagnostics for DX Units	wly installed process syst.  MCH-13A  Automatic Fault  Detection &  Diagnostics for Air &  Zone	ems must be tested to en MCH-14A Distributed Energy Storage DX AC Systems	sure proper operations MCH-15A Thermal Energy Storage (TES) Systems	MCH-16A Supply Air Temperature Reset Controls	MCH-17A Condenser Water Reset Controls	ECMS
Enforcement Ager Plancheck – The Ni Inspector - Before Test Descript Equipment Requiring Testing	ncy: RCC-MCH-0 occupancy tion # of	permit is granted all ne MCH-12A Fault Detection & Diagnostics for DX Units	wly installed process syst.  MCH-13A  Automatic Fault  Detection &  Diagnostics for Air &  Zone	ems must be tested to en  MCH-14A  Distributed Energy  Storage DX AC  Systems	sure proper operations MCH-15A Thermal Energy Storage (TES) Systems	MCH-16A Supply Air Temperature Reset Controls	MCH-17A Condenser Water Reset Controls	ECMS
Enforcement Ager Plancheck – The Ni Inspector - Before Test Descript Equipment Requiring Testing	ncy: RCC-MCH-0 occupancy tion # of	permit is granted all ne MCH-12A Fault Detection & Diagnostics for DX Units	wly installed process syst.  MCH-13A  Automatic Fault Detection & Diagnostics for Air & Zone	ems must be tested to en  MCH-14A  Distributed Energy Storage DX AC  Systems	sure proper operations MCH-15A Thermal Energy Storage (TES) Systems	MCH-16A Supply Air Temperature Reset Controls	MCH-17A Condenser Water Reset Controls	ECMS
Enforcement Ager Plancheck – The Ni Inspector - Before Test Descript Equipment Requiring Testing	ncy: RCC-MCH-0 occupancy tion # of	permit is granted all ne MCH-12A Fault Detection & Diagnostics for DX Units	wly installed process syst.  MCH-13A  Automatic Fault  Detection &  Diagnostics for Air &  Zone	ems must be tested to en MCH-14A Distributed Energy Storage DX AC Systems	sure proper operations MCH-15A Thermal Energy Storage (TES) Systems	MCH-16A Supply Air Temperature Reset Controls	MCH-17A Condenser Water Reset Controls	ECMS
Enforcement Ager Plancheck – The Ni Inspector - Before Test Descript Equipment Requiring Testing	ncy: RCC-MCH-0 occupancy tion # of	permit is granted all ne MCH-12A Fault Detection & Diagnostics for DX Units	wly installed process syst.  MCH-13A  Automatic Fault Detection & Diagnostics for Air & Zone	ems must be tested to en  MCH-14A  Distributed Energy Storage DX AC Systems	sure proper operations MCH-15A Thermal Energy Storage (TES) Systems	MCH-16A Supply Air Temperature Reset Controls	MCH-17A  Condenser Water Reset Controls	ECMS
Enforcement Ager Plancheck – The Ni Inspector - Before Test Descript Equipment Requiring Testing	ncy: RCC-MCH-0 occupancy tion # of	permit is granted all ne MCH-12A Fault Detection & Diagnostics for DX Units	wly installed process syst.  MCH-13A  Automatic Fault Detection & Diagnostics for Air & Zone	ems must be tested to en MCH-14A Distributed Energy Storage DX AC Systems	sure proper operations MCH-15A Thermal Energy Storage (TES) Systems	MOH-16A Supply Air Temperature Reset Controls	MCH-17A  Condenser Water Reset Controls	ECMS
Enforcement Ager Plancheck – The Ni Inspector - Before	ncy: RCC-MCH-0 occupancy tion # of	permit is granted all ne MCH-12A Fault Detection & Diagnostics for DX Units	wly installed process syst.  MCH-13A  Automatic Fault Detection & Diagnostics for Air & Zone	ems must be tested to en  MCH-14A  Distributed Energy Storage DX AC Systems	sure proper operations MCH-15A Thermal Energy Storage (TES) Systems	MOH-16A Supply Air Temperature Reset Controls	MCH-17A  Condenser Water Reset Controls	ECMS

June 2014

Equip MANE Heatir Coolin HVAC Furnac Low le Ventil Dema Occup Shuto Outdo Isolati	ment Tags and System Description <sup>1</sup> DATORY MEASURES  Ing Equipment Efficiency <sup>3</sup> or Heat Pump Thermostats  ce Standby Loss Control  eakage AHUs  ation <sup>4</sup> Ind Control Ventilation <sup>5</sup> cant Sensor Ventilation Control <sup>6</sup> off and Reset Controls <sup>7</sup> or Air and Exhaust Damper Control	TERATION)  T-24 Sections  110.1 or 110.2(a)  110.2 (b), 110.2(c)  110.2(d)  110.2(f)  120.1(b)  120.1(c)4  120.1(c)5, 120.2(e)3	Office Mech Syste	Date Prepared: 11/21/2014  Dequirements in the Co	
Equip MANE Heatir Coolin HVAC Furnac Low le Ventil Dema Occup Shuto Outdo Isolati	ment Tags and System Description <sup>1</sup> DATORY MEASURES  Ing Equipment Efficiency <sup>3</sup> or Heat Pump Thermostats  ce Standby Loss Control  eakage AHUs  ation <sup>4</sup> Ind Control Ventilation <sup>5</sup> cant Sensor Ventilation Control <sup>6</sup> off and Reset Controls <sup>7</sup> or Air and Exhaust Damper Control	T-24 Sections  110.1 or 110.2(a)  110.1 or 110.2(b)  110.2(b), 110.2(c)  110.2(d)  110.2(f)  120.1(b)  120.1(c)4	Office Mech Syste  Reference to the R  Sheet M0.1  Sheet M0.1  Sheet M0.1  Sheet M0.1  Sheet M0.1		
MANE Heatir Coolin HVAC Furna Low le Ventil Dema Occup Shuto Outdo Isolati	DATORY MEASURES  Ing Equipment Efficiency <sup>3</sup> Ing Equipment Equ	110.1 or 110.2(a) 110.1 or 110.2(a) 110.2(b), 110.2(c) 110.2(d) 110.2(f) 120.1(b) 120.1(c)4	Reference to the R Sheet M0.1 Sheet M0.1 Sheet M0.1 Sheet M0.1 Sheet M0.1		ontract Documents
MANE Heatir Coolin HVAC Furna Low le Ventil Dema Occup Shuto Outdo Isolati	DATORY MEASURES  Ing Equipment Efficiency <sup>3</sup> Ing Equipment Equ	110.1 or 110.2(a) 110.1 or 110.2(a) 110.2(b), 110.2(c) 110.2(d) 110.2(f) 120.1(b) 120.1(c)4	Reference to the R Sheet M0.1 Sheet M0.1 Sheet M0.1 Sheet M0.1 Sheet M0.1		ontract Documents
Heatir Coolin HVAC Furnac Low le Ventil Dema Occup Shuto Outdo Isolati	ng Equipment Efficiency <sup>3</sup> or Heat Pump Thermostats ce Standby Loss Control eakage AHUs ation <sup>4</sup> and Control Ventilation <sup>5</sup> cent Sensor Ventilation Control eff and Reset Controls <sup>7</sup> cor Air and Exhaust Damper Control	110.1 or 110.2(a) 110.1 or 110.2(a) 110.2(b), 110.2(c) 110.2(d) 110.2(f) 120.1(b) 120.1(c)4	Sheet M0.1 Sheet M0.1 Sheet M0.1 Sheet M0.1 Sheet M0.1	equirements in the Co	ontract Documents
Coolin HVAC Furnac Low le Ventil Dema Occup Shuto Outdo Isolati	ng Equipment Efficiency <sup>3</sup> or Heat Pump Thermostats ce Standby Loss Control eakage AHUs ation <sup>4</sup> ind Control Ventilation <sup>5</sup> cant Sensor Ventilation Control <sup>6</sup> iff and Reset Controls <sup>7</sup> cor Air and Exhaust Damper Control	110.1 or 110.2(a) 110.2(b), 110.2(c) 110.2(d) 110.2(f) 120.1(b) 120.1(c)4	Sheet M0.1 Sheet M0.1 Sheet M0.1 Sheet M0.1		
Coolin HVAC Furnac Low le Ventil Dema Occup Shuto Outdo Isolati	ng Equipment Efficiency <sup>3</sup> or Heat Pump Thermostats ce Standby Loss Control eakage AHUs ation <sup>4</sup> ind Control Ventilation <sup>5</sup> cant Sensor Ventilation Control <sup>6</sup> iff and Reset Controls <sup>7</sup> cor Air and Exhaust Damper Control	110.2(b), 110.2(c) 110.2(d) 110.2(f) 120.1(b) 120.1(c)4	Sheet M0.1 Sheet M0.1 Sheet M0.1		
Furnac Low le Ventil Dema Occup Shuto Outdo Isolati	ce Standby Loss Control eakage AHUs ation <sup>4</sup> and Control Ventilation <sup>5</sup> bant Sensor Ventilation Control <sup>6</sup> and Reset Controls <sup>7</sup> bor Air and Exhaust Damper Control	110.2(b), 110.2(c) 110.2(d) 110.2(f) 120.1(b) 120.1(c)4	Sheet M0.1 Sheet M0.1		
Low le Ventil Dema Occup Shuto Outdo Isolati	eakage AHUs ation <sup>4</sup> ind Control Ventilation <sup>5</sup> pant Sensor Ventilation Control <sup>6</sup> off and Reset Controls <sup>7</sup> por Air and Exhaust Damper Control	110.2(f) 120.1(b) 120.1(c)4	Sheet M0.1		
Ventil Dema Occup Shuto Outdo Isolati	ation <sup>4</sup> and Control Ventilation <sup>5</sup> cant Sensor Ventilation Control <sup>6</sup> and Reset Controls <sup>7</sup> cor Air and Exhaust Damper Control	120.1(b) 120.1(c)4			
Ventil Dema Occup Shuto Outdo Isolati	ation <sup>4</sup> and Control Ventilation <sup>5</sup> cant Sensor Ventilation Control <sup>6</sup> and Reset Controls <sup>7</sup> cor Air and Exhaust Damper Control	120.1(b) 120.1(c)4	Sheet M0.1		
Occup Shuto Outdo Isolati	pant Sensor Ventilation Control <sup>6</sup> ff and Reset Controls <sup>7</sup> por Air and Exhaust Damper Control	120.1(c)4			
Occup Shuto Outdo Isolati	pant Sensor Ventilation Control <sup>6</sup> ff and Reset Controls <sup>7</sup> por Air and Exhaust Damper Control		Sheet M0.1		
Shuto Outdo Isolati	ff and Reset Controls <sup>7</sup> oor Air and Exhaust Damper Control	1 120.1(0)3, 120.2(0)3	Sheet M0.1		
Isolati	185	120.2(e)	Sheet M0.1		
Isolati	185	120.2(f)	Sheet M0.1		
	ion Zones	120.2(g)	Sheet M0.1		
Auton	natic Demand Shed Controls	120.2(h)	Sheet M0.1		
Econo	omizer FDD	120.2(i)	Sheet M0.1		
Duct I	Insulation	120.4	Sheet M0.1		
PRESC	CRIPTIVE MEASURES	JOHN TO COMPANY (1990)			
	ment is sized in conformance with	140.4(a & b)			
22 23	(a & b)		Y		
Supply	y Fan Pressure Control	140.4(c)	Sheet M0.1		
Simult	taneous Heat/Cool <sup>8</sup>	140.4(d)	Sheet M0.1		
Econo	pmizer	140.4(e)	Sheet M0.1		
Heat a	and Cool Air Supply Reset	140.4(f)	Sheet M0.1		
Electri	ic Resistance Heating <sup>9</sup>	140.4(g)	Sheet M0.1		
Duct L	Leakage Sealing and Testing. <sup>10</sup>	140.4(I)	Sheet M0.1		
Notes	:	*	3	\$	
	Provide equipment tags (e.g. AHU 1 to 1	(B) (B)	n (e.g. Single Duct VA	V reheat) as approprio	ate. Multiple units
	with common requirements can be grou		regional design of the state of	594 00N 1 898 UZW	nas nas reas see
	Provide references to plans (i.e. Drawing				
	paragraphs) where each requirement is	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.5	25 (5)	
	The referenced plans and specifications				
	capacity, Title 24 minimum efficiency re requirements are applicable (e.g. full- ar				
	equipment is required to be listed per Ti	AND DESCRIPTION OF THE PROPERTY OF THE PROPERT	where apphance star	idalas apply (110.1), i	dentify where
	Identify where the ventilation requireme		each central HVAC sys	stem. Include referenc	ces to both central
	unit schedules and sequences of operati				
	plans and specifications. Multiple zone o				
	if one or more space has demand contro		5.	570	cifications and the
	sequence of operation.				28
6.	lf one or more space has occupant senso	or ventilation control ider	ntify where it is specifi	ied including the senso	or specifications an
	the sequence of operation				
300-00-0	If the system is DDC identify the sequent For all systems identify the specification			그렇게 느꼈다. 그는 그 아이는 그 없는 그는 것이 나는 그는 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그	setup (if required)

8. Identify where the heating, cooling and deadband airflows are scheduled for this system. Include a reference to the

Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.
 If duct leakage sealing and testing is required, a MCH-04-A form must be submitted.

specification of the zone controls. Provide a MCH-03-E form.

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

THE ABOVE BRAWINGS AHD SPECIFICATIONS AND IDEAS DESIGNS AND PROCESSORY OF THE ARCHITECT. AND NO PART THREEOF SHALL BE COPIED DISCLOSED TO OTHERS OF THE ARCHITECT. AND NO PART THREEOF SHALL BE COPIED DISCLOSED TO OTHERS OF USE OF THE ARCHITECT. AND NO PART THREEOF SHALL BE COPIED DISCLOSED TO OTHERS OF THE ARCHITECT. USUAL CONTRACT WITH THE ARCHITECT. OSCILLATION OF THE ARCHITECT. USUAL CONTRACT WITH THE ARCHITECT. USUAL CONTRACT WIT

KHALIFEH

& ASSOCIATES, INC.

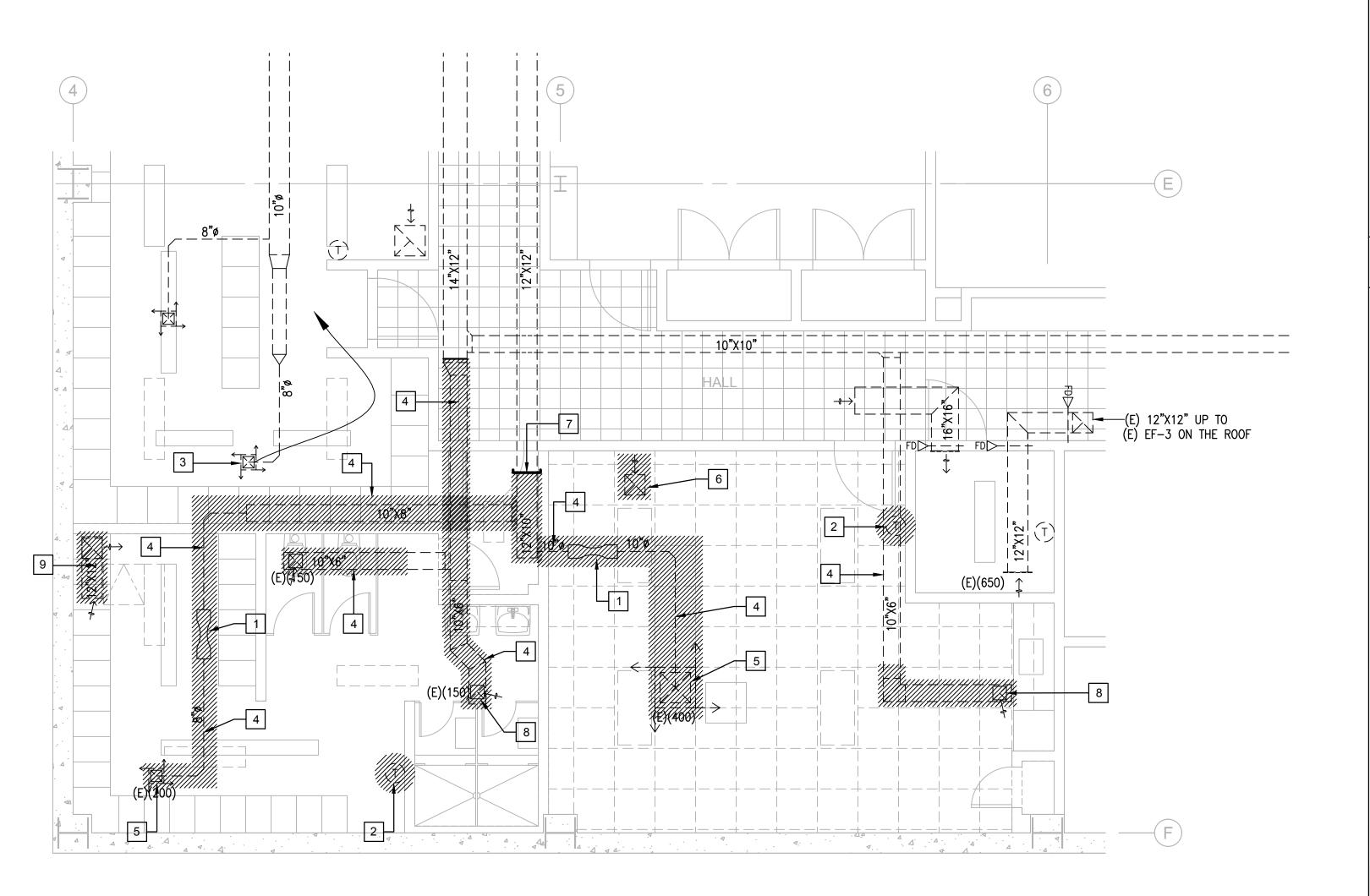
CONSULTING ENGINEERS

KHALIFEH & ASSOCIATES, INC.

13465 BEACH AVE., SUITE B TEL: (310) 305-1555
MARINA DEL REY, CA 90292 FAX: (310) 305-1550

www.khalifehassociates.com

M0 - 3



DEMOLITION FLOOR PLAN
SCALE: 1/4"=1'-0"

# **DEMOLITION KEYNOTES**

- DEMO EXISTING VAV BOXES AND ALL ASSOCIATED AUXILLARIES AND ACCESSORIES, WIRING ETC. VERIFY EXACT LOCATION IN THE FIELD.
- DEMO EXISTING THERMOSTAT AND ASSOCIATED ACCESSORIES, WIRING ETC. AS SHOWN. COORDINATE EXACT LOCATION WITH THE ARCHITECT.
- RELOCATE EXISTING SUPPLY AIR REGISTERS AS SHOWN. EXTEND AND MODIFIED EXISTING DUCTWORK AS REQUIRED. COORDINATE EXACT LOCATION LOCATION WITH THE ARCHITECT.
- REMOVE EXISTING DUCTWORK, VOLUME DAMPER AND ASSOCIATED DUCT SUPPORTS/HANGERS AND ASSOCIATED ACCESSORIES. VERIFY EXACT LOCATION IN THE FIELD.
- REMOVE EXISTING CEILING MOUNTED SUPPLY AIR REGISTERS IN THIS LOCATION. VERIFY EXACT LOCATION IN THE FIELD. CONTRACTOR TO VERIFY EXISTING CEILING REGISTERS SIZES AND NC LEVEL BEFORE RE-UTILIZING OR RE-USE THE REGISTERS.
- REMOVE EXISTING CEILING MOUNTED RETURN AIR REGISTERS IN THIS LOCATION. VERIFY EXACT LOCATION IN THE FIELD. CONTRACTOR TO VERIFY EXISTING CEILING REGISTERS SIZES AND NC LEVEL BEFORE RE-UTILIZING OR RE-USE THE REGISTERS.
- CAP EXISTING DUCTWORK IN THIS LOCATION. VERIFY EXACT LOC. IN THE FIELD.
- 8 REMOVE EXISTING EXHAUST AIR REGISTERS. VERIFY EXACT LOCATION IN FIELD.
- 9 REMOVE EXISTING TRANSFER AIR DUCT AND ASSOCIATED TRANFER AIR GRILLE. VERIFY EXACT LOCATION IN FIELD.

LOYD JONES CHITECT

WILLIAM LO ARCHI 723 oceanf venice, co 9 0 2

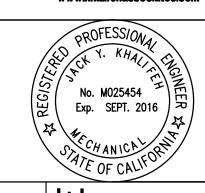
KHALIFEH

8 ASSOCIATES, INC.
CONSULTING ENGINEERS

KHALIFEH & ASSOCIATES, INC.

13465 BEACH AVE., SUITE B TEL. (310) 305-1555

MARINA DEL REY, CA 90292 FAX. (310) 305-1550



JEMO PLANS

VCE POLICE

TROOM /

TROOM /

TROOM /

Issue

# GENERAL DEMOLITION NOTES

 ALL DEBRIS SHALL BE DISPOSED OF IN AN APPROVED MANNER.
 REPAIR AND PATCH ALL AFFECTED AREAS INCLUDING WALL AND CEILING OPENINGS TO MATCH EXISTING SURROUNDINGS AND MAINTAIN THE FIRE RATING OF EXISTING STRUCTURES.

3. LOCATIONS OF EXISTING EQUIPMENT, DUCTS, PIPES, ETC. ARE APPROXIMATE AND ARE INDICATED FOR REFERENCE ONLY. EXACT LOCATIONS SHALL BE VERIFIED IN THE FIELD.

DISPOSED OF ALL DEBRIS IN AN APPROVED MANNER.

CONSTRUCTION.

5. REPLACE DAMAGED DUCT AND PIPE INSULATION AS REQUIRED.

6. CLEAN THE SORROUNDING OF WORK AREA ON A DAILY BASIS AND

. SCHEDULE AND COORDINATE INSTALLATION AND DEMOLITION WORKS WITH OWNER'S REPRESENTATIVE TO MINIMIZE DOWNTIME DURING

THE ABOVE DRAWINGS AND SPECIFICATIONS AND IDEAS, DESIGNS AND ARRANGEMENTS REPRESENTED THEREBY ARE AND SHALL REMAIN THE PROPERTY OF THE ARCHITECT, AND NO PART THEREOF SHALL BE COPIED. DISCLOSED TO OTHERS OR USED IN CONNECTION WITH ANY WORK OR PRO OTHER THAN THE SPECIFIC PROJECT FOR WHICH THEY HAVE BEEN PREPAREI AND DEVELOPED WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT. VIZ CONTACT WITH THESE DRAWINGS OR SPECIFICATIONS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVE SCALED DIMENSIONS. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THIS OFFICE MUS BE NOTIFIED OF ANY VARIATIONS FROM THE JUMENSIONS AND CONDITIONS

Date 26.SEP.14

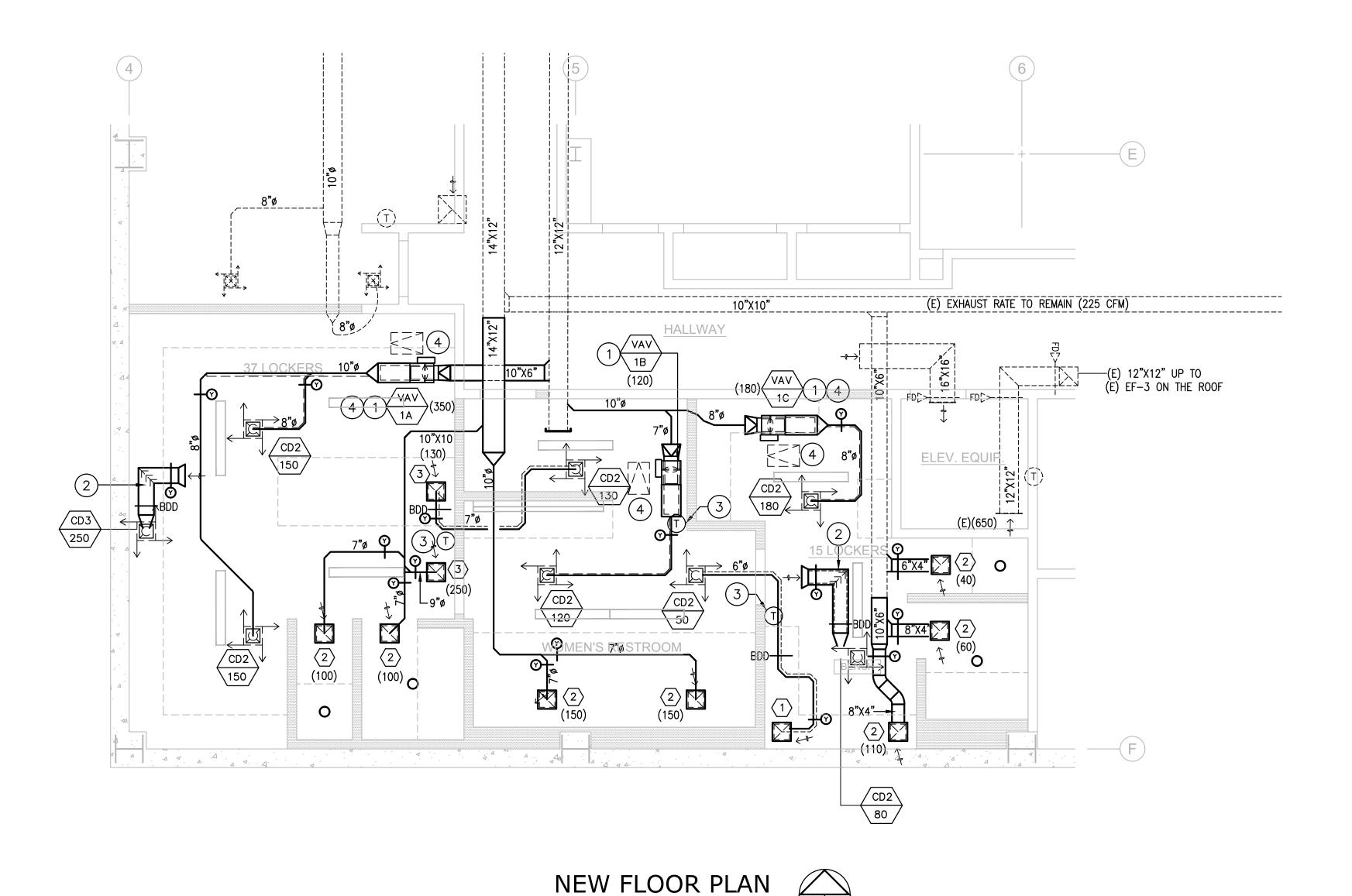
Drawn BDL

Checked JK

Scale AS NOTED

M1-1





# AIR BALANCE CALCULATION **EXISTING EXHAUST)** A. EXHAUST = 510 CFMTOTAL EXHAUST CAP DURING FORENSIC LAB RENOVATION EXISTING EXHAUST = 300 CFM FEMALE OFFICER SHOWER AND RESTROOM = 150 CFMEXISTING EXHAUST EMPLOYEEE LOUNGE TOTAL 960 CFM

AIR BALANCE CALCULA (NEW EXHAUST REQUIRE	
A. EXHAUST NEW EXHAUST RATE FOR NEW 37 LOCKER ROOM	= 450 CFM
NEW EXHAUST RATE FOR NEW 15 LOCKER ROOM	= 210 CFM
NEW EXHAUST RATE FOR NEW WOMEN'S RESTROOM	= 300 CFM
TOTAL	960 CFM

	BALANCE CALCULATI STING VAV BOXES)	<u>ON</u>		
Α.	SUPPLY EXISTING VAV-1 FEEDING FEMALE OFFICER SHOWER AND RESTROOM	=	200	CFM
	EXISTING VAV-2 FEEDING EMPLOYEEE LOUNGE	=	400	CFM
	TOTAL		600	CFM

	BALANCE CALCULAT VAV BOXES)	101	<u>1</u>	
1	SUPPLY NEW VAV-1A FEEDING NEW 37 LOCKER ROOM	=	350	CFM
•	NEW VAV-1C FEEDING NEW 15 LOCKER ROOM	=	180	CFM
	NEW VAV-1B FEEDING NEW WOMEN'S RESTROOM	=	120	CFM
-	TOTAL		650	CFM

# **KEY NOTES**

- (1) NEW VAV BOXES. VERIFY EXACT LOCATION IN THE FIELD.
- 2 PROVIDE LINED TRANSFER DUCT.
- 3 CORDINATE THERMOSTAT LOCATION WITH TORRANCE POLICE DEPARTMENT REPRESENTATIVE.
- 4 PROVIDE ACCESS PANEL. VERIFY EXACT SIZE LOCATION WITH TDD'S REP.

# MILLIAM LOYD JC ARCHITECT

CE DEPARTMENT

ER ROOM RENOVATION

TORRANCE POLICE WOMEN'S RESTROOM / LOCKER RO

~

Issue

# GENERAL NOTES

- 1. REPAIR AND PATCH ALL WALL AND CEILING OPENINGS TO MATCH EXISTING SURROUNDINGS AND MAINTAIN THE FIRE RATING OF EXISTING STRUCTURES.
- 2. INSULATE AND REPAIR ALL DUCTWORK AND PIPING
- WHICH ARE DAMAGED.

  3. ALL NEW AND EXISTING DUCTWORK TO BE RE-USED SHALL BE PRESSURE TESTED BEFORE PROVIDING DUCTWORK INSULATION. CHECK AND REPAIR FOR LEAKS.
- 4. USE DUCTWORK FIBERGLASS INSULATION WITH VAPOR BARRIER.
- 5. LOCATIONS OF EXISTING EQUIPMENT, DUCTS, PIPES, ETC.
  ARE APPROXIMATE AND ARE INDICATED FOR REFERENCE
- ONLY. EXACT LOCATIONS SHALL BE VERIFIED IN THE FIELD.

  6. AIR BALANCE ALL AIR OUTLETS AND AIR INLETS TO INDICATED
- 7. CLEAN THE SORROUNDING OF WORK AREA ON A DAILY BASIS AND DISPOSE OF ALL DEBRIS IN AN APPROVED MANNER.
- 8. SCHEDULE AND COORDINATE INSTALLATION AND DEMOLITION WORK WITH OWNERS REPRESENTATIVE TO MINIMIZE DOWN TIME AND MEET REQUIRED PHASING OF THE PROJECT.
- 9. COORDINATE EXACT LOCATIONS OF THERMOSTATS, DIFFUSERS, REGISTERS AND GRILLES W/ ARCHITECT.
- 10. PROVIDE CEILING ACCESS PANEL TO ALL VAV BOXES, DAMPERS, AND SFD LOCATED OVER NON-ACCESSIBLE CEILING.
- 11. PROVIDE YOUNG REGULATORS REMOTE OPERATOR DAMPER WHERE CEILING IS NON-ACCESSIBLE.
- 12. THE SPACE ABOVE CEILINGS IS USED AS RETURN AIR PLENUM COMBUSTIBLE MATERIALS ARE NOT ALLOWED BY CODE.13. VERIFY THE DUCT SIZES ARE AT MINIMUM SIZES CALL OUT ON PLAN

OTHERWISE EXTEND A NEW BRANCH DUCT FROM VAV BOX PLENUM.

M2-1

THE ABOVE DRAWINGS AND SPECIFICATIONS AND IDEAS, DESIGNS AND ARRANGEMENTS REPRESENTED THEREBY ARE AND SHALL REMAIN THE PROPERTY OF THE ARCHITECT, AND NO PART THEREOF SHALL BE COPIED, DISCLOSED TO GTHERS OF USED IN CONNECTION WITH ANY WORK OR PROJUCT FOR WHICH THEY HAVE BEEN PREPARED AND DEVELOPED WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT, VISICONTACT WITH THESE PRAWINGS OF SPECIFICATIONS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THIS OFFICE MUST BE NOTIFIED OF ANY VARIATIONS FROM THE JOB AND THIS OFFICE MUST BE NOTIFIED OF ANY VARIATIONS FROM THE DIMENSION CONDITIONS SHOWN BY THESE DRAWINGS. SHOP DETAILS MUST BE SUBMITTED TO THIS SHOWN BY THESE DRAWINGS. SHOP DETAILS MUST BE SUBMITTED TO THIS

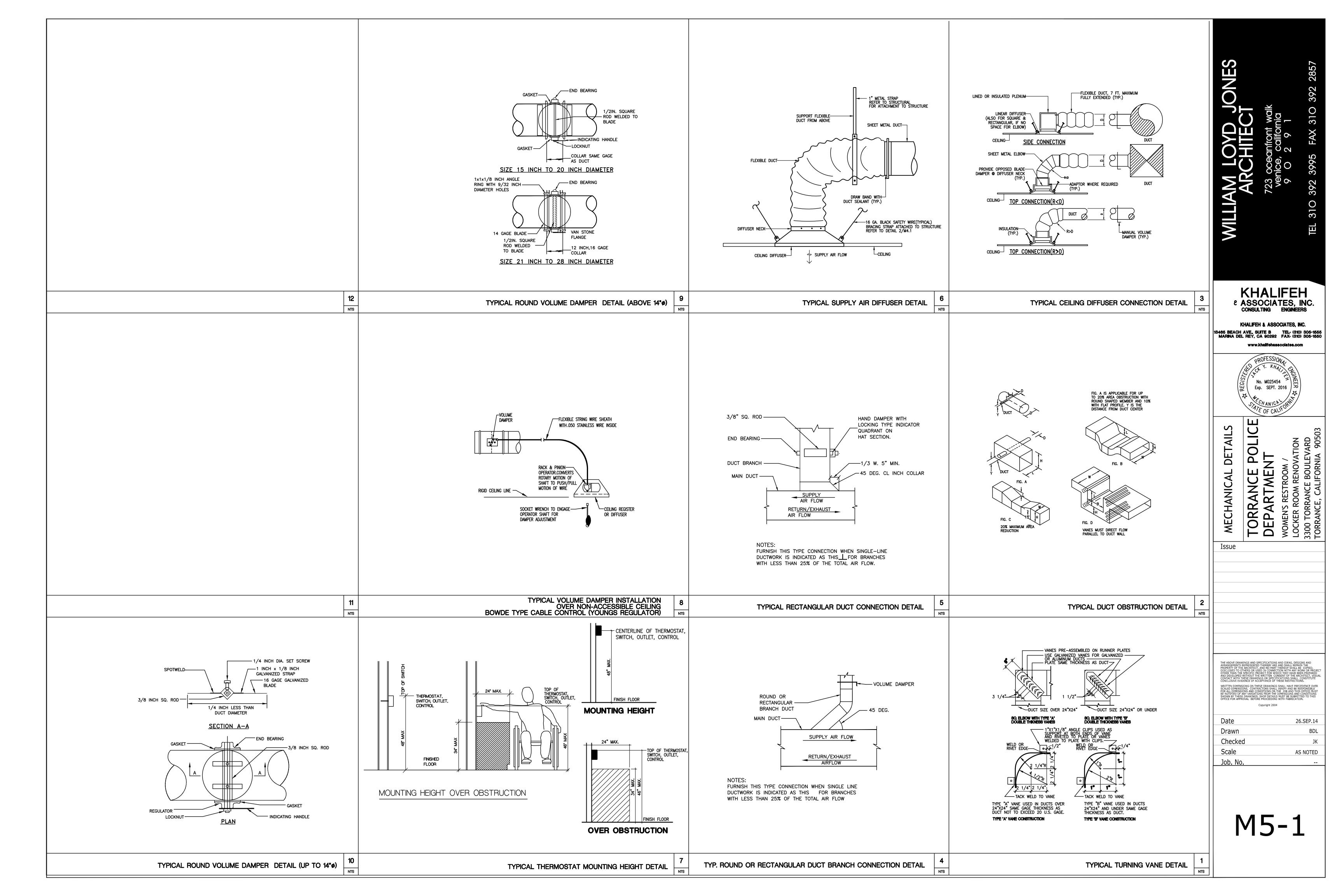
Date 26.SEP.14

Drawn KC

Checked WLJ

Scale AS NOTED

Job. No.



# FIRE/SMOKE DAMPER SPECIFICATIONS:

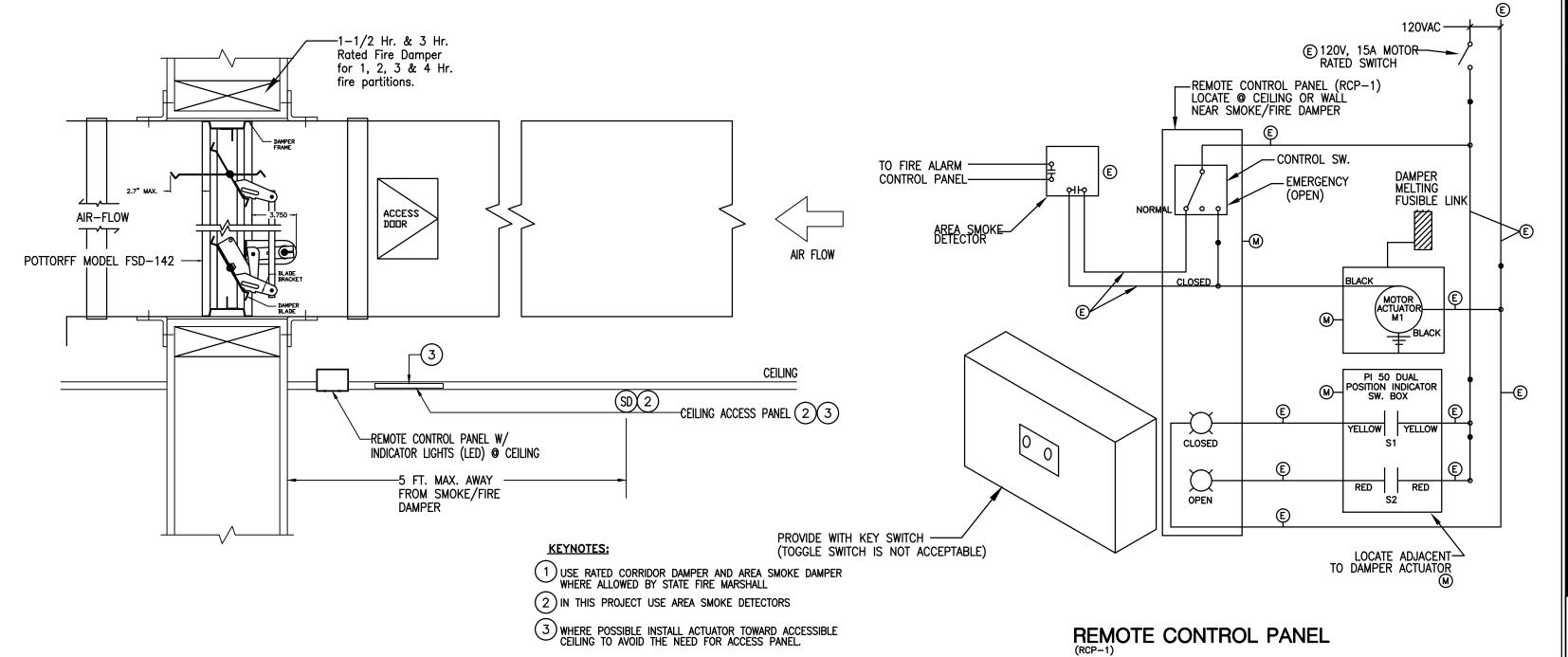
ALL FIRE DAMPERS SHALL BE LABELED AND LISTED BY CALIFORNIA STATE FIRE MARSHAL AND/OR UNDERWRITERS LABORATORIES. ALL DAMPERS MUST ALSO BE LEAKAGE RATED AND LABLED UNDER UNDERWRITER LABORATORIES STD. 555S. WITH METAL SEALS ALLOWING NO MORE THAN 10 CFM/SQ.FT. AT 1" W.G. TO 350° F FOR A FULL 30 MIN. CAN BE MOTOR OPERATED. TORQUE REQ'D. TO MAINTAIN LEAKAGE RATE NOT TO EXCEED 0 LBS. TORQUE. DAMPERS SHALL BE INSTALLED PER MANUFACTURERS INSTALLATION INSTRUCTIONS AND/OR STATE FIRE MARSHAL LISTING NO. 03225. POTTORFF COMPANY, INC. (NO RUBBER SEALS ALLOWED) (LISTING # 03225:0368:110 AND 03230:0368:111) PROVIDE NON STALL SOLENOID MOTOR, 64 VA. MAXIMUM. TESTED FOR 1 YEAR CONTINUOUS POWER APPLICATIONS SUCH AS INVENSYS, SIEMENS AND HONEYWELL. OR APPROVED EQUAL.

## COMBINATION FIRE/SMOKE DAMPER

OPENING TO BE SINGLE HEADER FRAMING FOR WOOD OR STEEL. WOOD FRAMED OPENINGS MUST BE LINED WITH MINIMUM 5/8" TYPE X GYP. BOARD. LINING NOT REQUIRED AT STEEL STUD, CONCRETE, OR MASONRY. SUGGESTED CLEARANCE BETWEEN SLÉEVE AND OPENING 1/8" FOR EACH 12" DAMPER WIDTH AND HEIGHT FOR EXPANSION. DAMPER TO BE HELD IN PLACE BY RETAINING ANGLES ATTACHED TO SLEEVE ON BOTH SIDES OF PARTITION, AND AROUND ENTIRE PERIMETER OF THE SLEEVE. ANGLES TO BE MIN. 16 GA. 1-1/2" X 1-1/2" OR LARGER AS REQUIRED TO PROVIDE A MIN. 1" OVERLAP OF THE OPENING. ANGLES MAY BE MITERED, BUTTED OR OVERLAPPED AT THE CORNERS. ATTACH ANGLES TO THE SLEEVE (NOT THE PARTITION) WITH SHEET METAL SCREWS, BOLTS OR WELDS AS PER MANUFACTURERS INSTRUCTIONS. CONNECT DUCT TO SLEEVE WITH "S" TYPE SLIP CONNECTIONS. DO NOT USE MECHANICAL FASTENERS.

# NOTE

ACCESS POINTS SHALL BE PERMANENTLY IDENTIFIED ON THE EXTERIOR BY A LABEL WITH LETTERS NOT LESS THAN 1/2" INCH IN HEIGHT READING: "SMOKE DAMPER, FIRE DAMPER OR SMOKE/FIRE DAMPER."



COMBINATION SMOKE AND FIRE DAMPER INSTALLATION DETAIL (IF REQUIRED)

FLEXIBLE DUCT TO TROFFER OR DIFFUSER

MAX. HEIGHT 7'-0"

FURNISH THIS TYPE OF CONNECTION

WHEN SINGLE-LINE DUCTWORK IS INDICATED

SHEET METAL AS REQUIRED 8 ASSOCIATES, INC. CONSULTING ENGINEERS KHALIFEH & ASSOCIATES, INC.

NTS 13465 BEACH AVE., SUITE B TEL. (310) 305-1556 MARINA DEL REY, CA 90292 FAX. (310) 305-1550 No. M025454 Exp. SEPT. 2016

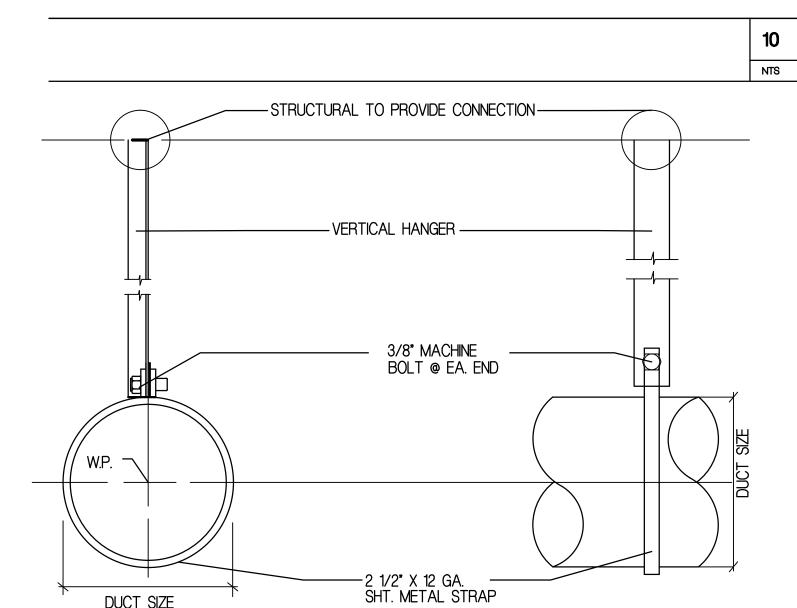
DETAIL POL

Issue

Copyright 2004 Date 26.SEP.14

Drawn Checked Scale AS NOTED

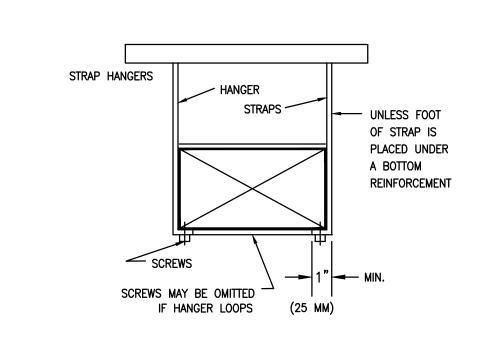
M5-2



# FOR DUCTS 36" DIA AND BELOW COMPLY WITH THIS DETAIL

<u>FUR L</u>	<u>UC 13 36 DIA. AIND D</u>	<u>ELUVV CUIVIPLY VVIIF</u>	I IUI2 DETAIL								
	TABLE 4.2 MINIMUM HANGER SIZES FOR ROUND DUCT										
DIA											
DIA.	MAXIMUM SPACING	ROD	STRAP								
10" DN	12'	1/4"	1" x 22 GA.								
11-18 <b>"</b>	12'	1/4"	1' x 22 GA.								
19-24"	12'	1/4"	1" x 20 GA.								
25-36"	12'	3/8"	1" x 20 GA.								

- 2. TABLE ALLOWS FOR CONVENTIONAL WALL THICKNESS, AND JOINT SYSTEMS PLUS ONE LB/SF
  (4.89 KG/SQ.M) INSULATION WEIGHT. IF HEAVIER DUCTS ARE TO BE INSTALLED, ADJUST HANGER SIZES TO BE WITHIN THEIR LOAD LIMITS; SEE ALLOWABLE LOADS WITH TABLE 4-1. HANGER SPACING MAY BE ADJUSTED BY SPECIAL ANALYSIS.
- 3. DESIGNERS: FOR INDUSTRIAL GRADE SUPPORTS, INCLUDING SADDLES, SINGLE LOAD TRAPEZE LOADS, LONGER SPANS AND FLANGE JOINT LOADS, SEE SMACNA'S ROUND INDUSTRIAL DUCT CONSTRUCTION STD.



			RECTAN	Table 4—1 Igular duct ha Inimum size	ANGERS			
MAXIMUM HALF	PAIR AT 10	FT. SPACING	PAIR AT 8	FT. SPACING	PAIR AT 5 F	PAIR AT 4 FT. SPACING		
OF DUCT PERIMETER	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD
P/2 = 30"	1"x22 GA.	10 GA. (0.135")	1"x22 GA.	10 GA. (0.135")	1" x 22 GA.	12 GA. (0.106")	1" x 22 GA.	12 GA. (0.135")
P/2 = 72"	1"x18 GA.	3/8"	1"x20 GA.	1/4"	1" x 22 GA.	1/4"	1" x 22 GA.	1/4"
P/2 = 96"	1"x16 GA.	3/8"	1"x18 GA.	3/8"	1" x 20 GA.	3/8"	1" x 22 GA.	1/4"
P/2 = 120"	1 1/2"x16 GA.	1/2"	1"x16 GA.	3/8"	1" x 18 GA.	3/8"	1" x 20 GA.	1/4"
P/2 = 168"	1 1/2"x16 GA.	1/2"	1 1/2"x16 GA.	1/2"	1" x 16 GA.	3/8"	1" x 18 GA.	3/8"
P/2 = 192"	NOT GIVEN	1/2"	1 1/2"x16 GA.	1/2"	1" x 16 GA.	3/8"	1" x 16 GA.	3/8"
P/2 = 193"				SPECIAL ANA	LYSIS REQUIRED	)		

AS THIS I FOR BRANCHES WITH LESS THAN 25% OF THE TOTAL AIR FLOW. ✓ VOLUME DAMPER ROUND OR RECTANGULAR BRANCH DUCT -— 45 DEGRESS MAIN DUCT -AIR FLOW FURNISH THIS TYPE OF CONNECTION EXHAUST/RETURN WHEN SINGLE-LINE DUCTWORK IS INDICATED AS THIS \( \preceq \) FOR BRANCHES WITH LESS THAN 25% OF THE TOTAL AIR FLOW. AIR FLOW MAIN DUCT

1.5 D

AIR FLOW

VOLUME DAMPER -

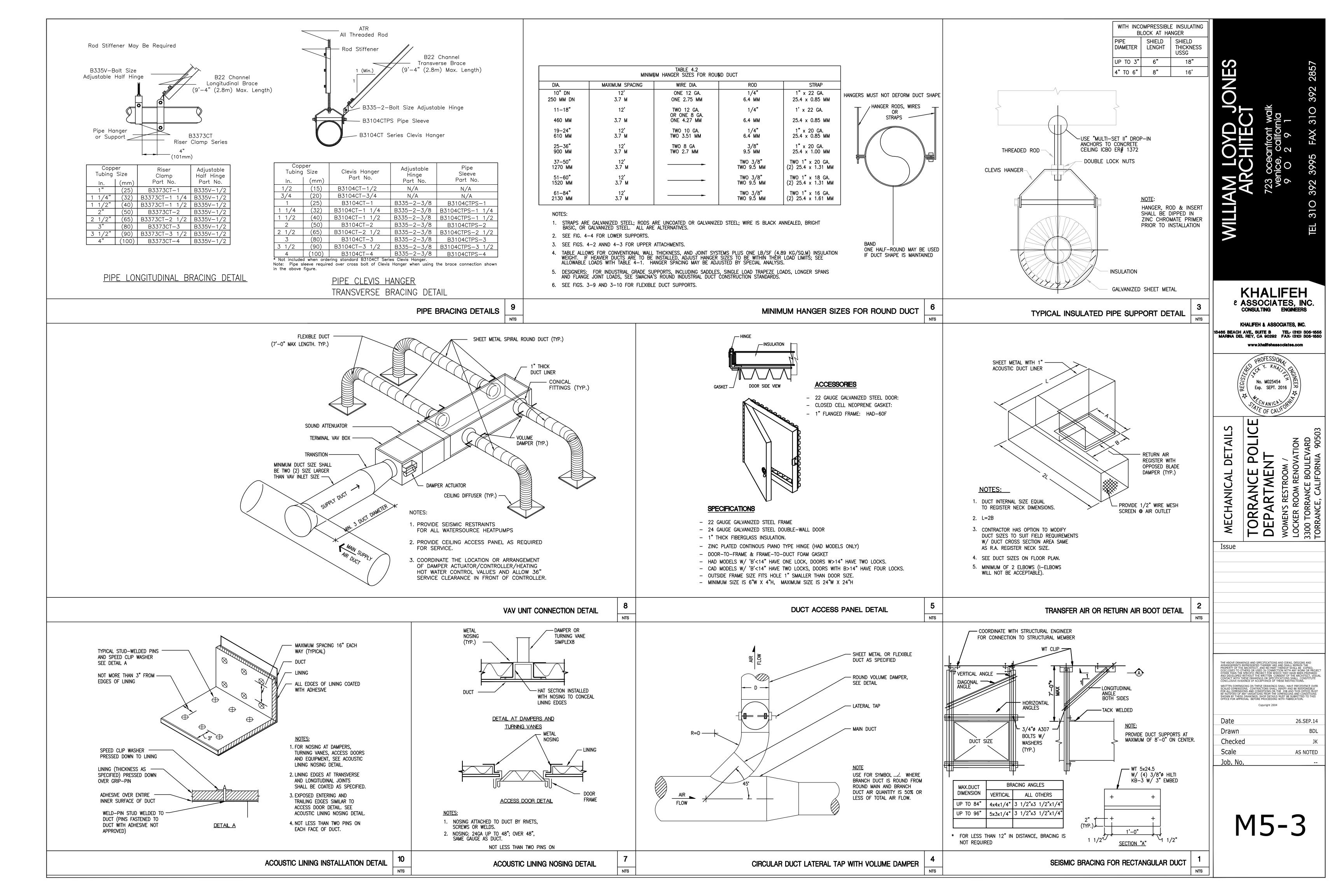
MAIN DUCT -

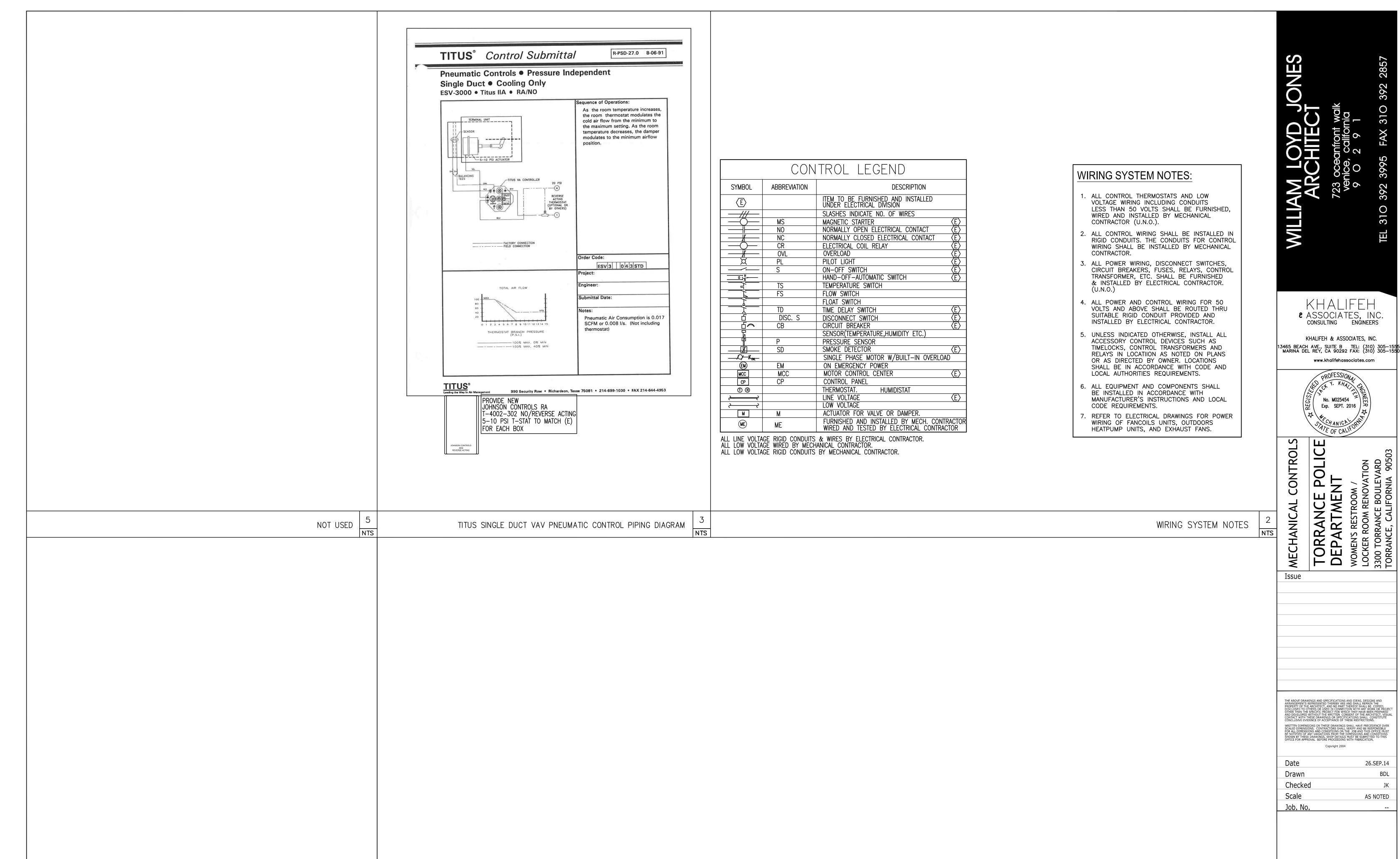
MIN. HANGER SIZES FOR ROUND DUCT

NTS

MIN. HANGER SIZES FOR RECTANGULAR DUCT

ROUND DUCT BRANCH CONNECTION





NOT USED

M6-1

26.SEP.14

AS NOTED

NOT USED

NTS

### **GENERAL NOTES** SYMBOLS REPRESENT EQUIPMENT AND OUTLET BOXES 1. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT A COMPLETE AND TO WHICH CONDUIT AND WIRE IS RUN FOR CONNECTION WORKABLE ELECTRICAL INSTALLATION BE PROVIDED FOR ALL THE EQUIPMENT TO FIXTURES AND DEVICES. DESCRIBED OR SHOWN AS BEING IN THIS CONTRACT. FURNISH ALL LABOR AND TOOLS NECESSARY TO INSTALL ALL APPARATUS. MATERIALS AND EQUIPMENT IN A FASHION COMPLYING WITH ALL APPLICABLE CODES, INCLUDING ITEMS REQUIRED GENERAL DESCRIPTION BUT NOT NORMALLY SHOWN, SUCH AS LAMPS, COUPLINGS, HANGERS, BRACKETS, CLAMPS, BOXES, CONNECTORS AND HARDWARE. REFER ALSO TO WRITTEN SPECIFICATIONS FOR GENERAL, MECHANICAL AND ELECTRICAL SECTIONS. 2'X4' FLUORESCENT LAMP FIXTURE . PROCURE ALL PERMITS FROM LEGALLY CONSTITUTED AUTHORITIES, ARRANGE FOR ALL INSPECTIONS AND PAY ALL COSTS FOR FEES AND TESTS IN CONNECTION 2'X2' FLUORESCENT LAMP FIXTURE THEREWITH. COMPLY WITH CALIFORNIA BUILDING CODES: NOTHING IN THESE PLANS AUTHORIZES DEVIATION FROM APPLICABLE CODES. . DETERMINE EXACT ROUTING OF CONCEALED FEEDERS AND BRANCH HOMERUNS IN COOPERATION WITH OTHER TRADES TO SIMPLIFY INSTALLATION WHEREVER POSSIBLE BUT SUBJECT TO APPROVAL OF ARCHITECT FOR VISUAL AND STRUCTURAL 4. PROVIDE A CODE APPROVED DISCONNECT SWITCH OR BREAKER WITHIN SIGHT OF EVERY MOTOR AND FEED MOTORS NOT EQUIPPED WITH "BUILT IN" PROTECTION (MOUNT AT DESIGNATED HEIGHT ABOVE FLOOR) THROUGH A MAGNETIC OR MANUAL STARTER WITH OVERLOAD HEATERS SIZED TO COMPLY WITH MOTOR MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE -0-1 (CONCEAL BALLAST IN ACCESSIBLE ENCLOSURE) 5. FOR CONNECTIONS TO EXHAUST FANS, PUMPS, COMPRESSORS, SPACE HEATERS, WATER HEATERS, AQUASTATS, SOLENOID VALVES AND OTHER MECHANICAL 4' LINEAR LOW VOLTAGE TRACK LUMINAIRE EQUIPMENT AND FOR CONDUITS AND WIRE REQUIRED, BUT NOT NECESSARILY SHOWN ON THESE DRAWINGS, REFER TO MECHANICAL PLANS AND DETERMINE INCANDESCENT WALL MOUNTED INTERIOR FIXTURE EXACT LOCATIONS UNDER DIRECTION OF THE MECHANICAL CONTRACTOR. 6. DO NOT RUN ANY CONDUIT IN SLAB IF ITS OUTSIDE DIAMETER EXCEEDS 1/3 THE THICKNESS OF THE SLAB. LOCATE CONDUITS WITHIN THE MIDDLE OF THE SLAB. WHERE CONDUITS ARE GROUPED IN PARALLEL RUNS, SPACE THEM 3" OR MORE APART. WHERE CONDUITS CROSS EACH OTHER, THICKEN SLAB PROPORTIONATELY OVER A HORIZONTAL AREA EQUAL TO TEN TIMES THE DIAMETER OF THE LARGEST CONDUIT. REFER ALSO TO DETAILS SHOWN. (AIM AS DIRECTED) 7. FOR CIRCUITS FED THROUGH FLUORESCENT FIXTURE CHANNELS AND FEEDS TO DECORATIVE PENDANT LUMINAIRE RECESSED INCANDESCENT FIXTURES. USE INSULATED WIRE OF MINIMUM 90 DEG. CELSIUS RATING. 8. IN EACH CONDUIT WITHOUT CONDUCTORS, PROVIDE ONE #12 TW COPPER (AIM AS DIRECTED) PULL—WIRE WITH A TAG IDENTIFYING LOCATION OF OPPOSITE END. 9. SIZE OUTLET BOXES IN CONFORMITY WITH CODE FOR NUMBER AND GAUGE OF **UPLIGHT** CONDUCTORS THEREIN, EXCEPT WHERE NOTED TO BE LARGER. MINIMUM BOX SIZE SHALL BE 4" SQUARE BY 1-1/2" DEEP. OUTLET BOXES ON OPPOSITE SIDES OF BOLLARD WALLS OR PARTITIONS MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF 24". LOW LEVEL EXIT SIGN +7"AFF. 10. EXAMINE PLANS TO DISCERN CEILINGS WITH A FIRE RATING OF ONE HOUR OR MORE. PROVIDE A ONE-HOUR FIRE-RATED ENCLOSURE OVER EACH LIGHT FIXTURE RECESSED THEREIN. (ARROW SHOWS ROUTE TO LEGAL EXIT) 11 AT THE TIME OF DESIGN UTILITY REQUIREMENTS HAVE NOT BEEN FINALLY $\Box$ LUMINAIRE ON POST TOP, SEE DETAIL CONFIRMED. MAKE FULL ALLOWANCE IN BID FOR ALL SERVICE COSTS LEVIED BY (ANCHOR FIXTURE AGAINST ROTATION) UTILITIES, INCLUDING CABLE COSTS AND ALL CONTINGENCIES NECESSARY TO COVER COSTS OF FINAL SERVICE CONNECTIONS AS REQUIRED. HANDLE ALL ARRANGEMENTS AND COSTS FOR TEMPORARY CONSTRUCTION POWER WHETHER FROM PORTABLE GENERATOR OR UTILITY COMPANY UNLESS OTHERWISE DESCRIBED (SEE SPECIFICATION FOR DIRECTIONS) IN "SPECIAL CONDITIONS". STEP LIGHT 12. NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED, ENTER OR PASS THROUGH OR ABOVE THE REQUIRED JUNCTION BOX, WITH COVER WORK SPACE OF THE ELECTRICAL EQUIPMENT. (4" SQUARE, DEEP, WITH PLASTER RING) 13. 'EXIT' SIGNS SHALL NOT BE USED AS JUNCTION BOXES. PROVIDE A SEPARATE J-BOX AT EACH "EXIT" SIGN LOCATION FOR MOUNTING PURPOSES AND FOR (CONFIRM LOCATION. SEE GEN. NOTE #9) 'THROUGH' & SIGN 'PIGTAIL WIRING. 14. ANY POWER OUTAGES SHALL BE APPROVED BY THE USER OF THE FACILITY. A FORTY-EIGHT HOUR WRITTEN NOTICE SHALL BE GIVEN FOR ANY OUTAGE REQUEST. 15. VERIFY EXACT LOCATION OF OUTLETS, SWITCHES, EQUIPMENT, ETC WITH PROJECT MANAGER PRIOR TO INSTALLATION. OWNER RESERVES THE RIGHT TO RELOCATE ANY UNINSTALLED OUTLET IN ANY DIRECTION (10'-0" MAXIMUM) WITHOUT CHANGE IN JUNCTION BOX, FOR DATA OUTLET. CONTRACT PRICE PRIOR TO INSTALLATION. 16. ALL LINE VOLTAGE WIRING SHALL BE MINIMUM #12 CU THHN/THWN. ALL NEW (HINGED BRASS COVER: 15 AMP. 120 VOLT) WIRING SHALL BE COPPER WITH "THHN" OR "THWN" 600-VOLT INSULATION. COLOR CODE ALL BRANCH CIRCUIT WIRING. 17. ELECTRICAL BOXES OR FITTINGS SHALL BE FLUSH WITH FINISH SURFACE OR (HINGED BRASS COVER: 15 AMP. 120 VOLT) RECESSED NO MORE THAN 1/4 INCH IN NON-COMBUSTIBLE WALLS OR CEILING. 18. ALL OUTLETS & DEVICES SHALL BE FLUSH WITH WALL, UNLESS OTHERWISE NOTED INDICATED ON PLAN. MOUNT AT +15" AFF AS SURFACE MOUNTED. 19. CONTRACTOR SHALL CORE DRILL, SAW CUT. PATCH TO MATCH ADJACENT (15 AMP. 120 VOLT, COVER PLATE SPECIFIED) SURFACES, AND PAINT ALL EXPOSED CONDUITS & BOXES TO MATCH ROOM FINISH. 20. ALL SWITCHES SHALL BE INSTALLED LESS THAN 48" ABOVE FINISH FLOOR, ALL RECEPTACLES SHALL BE INSTALLED NO LOWER THAN 15" A.F.F. (20 AMP. 120 VOLT, COVER PLATE SPECIFIED) 21. PIPES, CONDUITS AND DUCTS SHALL NOT PENETRATE INTO OR THROUGH STAIRWELL OR STAIR VESTIBULE EXIT ENCLOSURE PER U.B.C. 1005. 3.3.5. 22. ELECTRICAL EQUIPMENT SHALL BE LISTED BY A CITY OF LOS ANGELES (20 AMP. 120 VOLT, COVER PLATE SPECIFIED) RECOGNIZED TESTING LABORATORY OR APPROVED BY THE BUILDING DEPARTMENT. DUPLEX RECEPTACLE. MOUNTED AT CEILING. 23. ALL WORK TO COMPLY WITH 2013 CALIFORNIA ELECTRICAL CODE. 24. PROVIDE U.L. LISTED GFI EQUIPMENT AND INSURE PROPER OPERATION PER CEC 110.10 (15 AMP. 120 VOLT, 3W) GFCI **DEMOLITION NOTES** (MARK PLATE WITH ROUND RED DOT) $\bigoplus$ THE ELECTRICAL CONTRACTOR SHALL REMOVE ALL LIGHT FIXTURES AND ELECTRICAL

- DEVICES WITH ASSOCIATED CONDUIT AND WIRING IN THE WAY OF THE NEW TENANT IMPROVEMENT SCOPE OF WORK.
- 2. IT IS THE RESPONSIBILTY OF THE CONTRACTOR TO STORE AND RE-USE LUMINAIRES CONDUIT AND WIRING WHERE POSSIBLE.
- 3. REMOVE SURFACE MOUNTED OUTLETS, CONDUIT, WIRING, ETC., AND ABANDON CONCEALED CONDUITS (IN CONCRETE) IN PLACE THAT ARE NO LONGER REQUIRED. ANY ELECTRICAL DEMOLITION OF WIRES TO BE PULLED OUT OF THE OVERHEAD AREA MUST BE COMPLETELY REMOVED AND NOT LEFT ABANDONED IN THE SPACE ABOVE THE DROPPED CEILING. ANY UNNEEDED EXISTING CONDUIT AND WIRING FOUND ABANDONED IN THE OVERHEAD CEILING SPACE SHALL BE REMOVED COMPLETELY.
- 4. EXTEND BRANCH CIRCUIT CONDUIT & WIRING TO MATCH EXISTING FOR ALL RELOCATED DEVICES AND EQUIPMENT.
- 5. MAINTAIN CIRCUIT CONTINUITY TO ALL EXISTING EQUIPMENT AND DEVICES TO REMAIN IN OPERATION. REROUTE CONDUIT AND WIRING FROM THE DEVICES REMOVED TO THE NEAREST DEVICE WHICH WILL REMAIN.
- 5. CIRCUITRY WHICH IS NO LONGER IN USE, SHALL BE REMOVED BACK TO THE SOURCE OR TO THE NEAREST DEVICE THAT WILL REMAIN IN SERVICE.
- · PROVIDE CIRCUIT IDENTIFICATION TO EXISTING DEVICES THAT WILL REMAIN AFTER NEW
- 8. THE CONTRACTOR SHALL REPAIR AND/OR REPAINT ALL AREAS DAMAGED BY DEMOLITION OR CONSTRUCTION AND FINISH TO MATCH EXISTING ADJACENT SURFACES.
- 9. THE CONTRACTOR SHALL PROTECT & COVER ALL FIXTURES & EQUIPMENT IN AREAS AFFECTED BY WORK & UPON COMPLETION OF WORK WORK SHALL THOROUGHLY CLEAN ALL FIXTURES, EQUIPMENT, WALLS, CEILING FLOOR & HARDWARE.

# 2'X4' OR 2'X2' FLUORESCENT FIXTURE ON EM CIRCUIT. 1'X4' SURFACE OR CEILING MOUNTED FLUORESCENT FIXTURE. (USE 1-1/2" SPACERS ON COMBUSTIBLE CEILING) FLUORESCENT FIXTURE SUSPENDED BELOW CEILING. FLUORESCENT STRIP LIGHT WITH SEPARATE BALLAST INCANDESCENT OR HID FIXTURE RECESSED IN CEILING (KEEP J-BOX ACCESSIBLE FROM WITHIN FIXTURE) INCANDESCENT OR HID, WALL WASH RECESSED FIXTURE INCANDESCENT CLUSTER OF ADJUSTABLE REFLECTOR LAMPS LIGHTED EXIT SIGN. CEILING, WALL MOUNTED OR RECESSED DOTTED SYMBOL IS EXISTING ITEM, OR FURNISHED BY OTHER JUNCTION BOX, WALL MOUNTED, WITH COVER, +15" JUNCTION BOX. FLUSH IN FLOOR, ADJUSTABLE HEIGHT COVER (SUBSCRIPTS: M=MIKE, P=PROJECTOR, C=CONTROLS) JUNCTION BOX, FLUSH IN FLOOR, ADJUSTABLE HEIGHT COVER (WITH 90 CLOSE ELBOW AND FLUSH FLOOR COUPLING) DUPLEX RECEPTACLE, FLUSH IN FLOOR, W.T. J-BOX DOUBLE DUPLEX RECEPTACLE, FLUSH IN FLOOR, W.T. J-BOX SINGLE OUTLET RECEPTACLE, RATING AND CONFIGURATION AS DUPLEX RECEPTACLE, FLUSH IN WALL, GROUNDING TYPE +15" DOUBLE DUPLEX RECEPTACLE, FLUSH IN WALL (15A, 120V) DUPLEX RECEPTACLE, FLUSH IN WALL, GROUNDING TYPE +15" DUPLEX RECEPTACLE, FLUSH IN WALL, GROUNDING TYPE +15" (FOR SHOW WINDOW CONNECTION 20A, 120V, 3W) DUPLEX RECEPTACLE, WITH GROUND FAULT CIRCUIT INTERRUPTER SHADING DENOTES ONE-HALF RECEPTACLE SWITCHED +15" SPECIAL PURPOSE RECEPTACLE, RATING AND CONFIGURATION AS INDICATED ON PLAN. MOUNT +15" AFF. POWER RECEPTACLE, IN SURFACE BOX, MTD. +15" (15A, 120V) DUPLEX RECEPTACLE, WITH ISOLATED GROUND (15A, 120V) **CONTRACTOR NOTES**

- 1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT ALL APPLICABLE SAFETY LAWS ARE STRICTLY ENFORCED AND TO MAINTAIN A SAFE CONSTRUCTION PROJECT.
- 2. THE CONTRACTOR SHALL REPAIR AND/OR REPAINT ALL AREAS DAMAGED BY CONSTRUCTION AND FINISH TO MATCH EXISTING ADJACENT SURFACES.
- 3. THE CONTRACTOR SHALL SUBMIT "AS BUILT" DRAWINGS UPON COMPLETION OF CONSTRUCTION.
- 4. DAILY AND UPON COMPLETION OF WORK, CONTRACTOR SHALL REMOVE DEBRIS,

RUBBISH, WASTE, AND SURPLUS MATERIAL FROM PREMISES.

5. THE CONTRACTOR SHALL PROTECT AND COVER ALL FIXTURES AND EQUIPMENT IN AREAS AFFECTED BY WORK AND UPON COMPLETION OF WORK SHALL THOROUGHLY CLEAN ALL FIXTURES, EQUIPMENT, WALLS, CEILING, FLOOR AND HARDWIRE.

### **ELECTRICAL SYMBOLS LIST** NOT ALL SYMBOLS APPLY TO THIS PROJECT: DISREGARD THOSE NOT USED ON PLANS AND IN DETAILS. GENERAL DESCRIPTION BUZZER IN FLUSH BOX, CONFIRM HEIGHT BELL, SURFACE OR RECESSED AS DESCRIBED (SUBSCRIPT DENOTES BELL DIAMETER INCHES) DATA/COMMUNICATION OUTLET FLUSH IN WALL +15" **→** (PROVIDE 3/4"C.O. STUB UP +6" ABOVE CEILING) TELEPHONE OUTLET, FLUSH IN WALL, +15" (PROVIDE 3/4"C.O. STUB UP +6" ABOVE CEILING) DATA/TELEPHONE OUTLET, FLUSH IN WALL, +15" (PROVIDE 3/4"C.O. STUB UP +6" ABOVE CEILING) \_----TELEPHONE OUTLET, PUBLIC/PRIVATE, FLUSH IN FLOOR (SEE SPECS. FOR SERVICE FITTINGS) JUNCTION BOX FLUSH ON WALL AT +6"AFF WITH WHIP FOR POWER CONNECTION TO FURNITURE SYSTEM JUNCTION BOX FLUSH ON WALL AT +6"AFF FOR TEL/DATA CONNECTION TO FURNITURE SYSTEM. PROVIDE 1" C.O. STUB +6" ABOVE ACCESSIBLE CEILING. TERMINAL CABINET WITH HINGED DOOR, LOCK, BARRIERS (PROVIDE TERMINALS & 3/4" PLYWOOD BACKBOARD) TERMINAL BOARD OF 3/4" THICK PLYWOOD ON WALL (SIZE AS NOTED, PAINT TO MATCH WALL) TELEVISION CABLE OUTLET, FLUSH IN WALL +15" (SEE SPECS. FOR JACK & TERMINATING IMPEDANCE) WALL MOUNTED TIMER DEVICE SPRING WOUND MECHANICAL TIMER 0-2 HR. 120 VOLT CLOCK OUTLET, FLUSH IN WALL, CONFIRM HEIGHT $\Theta$ (MASTER CONTROLLED 120 VOLT 60 CYCLE SYNCHRONOUS) PUSH-BUTTON FLUSH IN WALL, MOMENTARY CONTACT •H (ENGRAVE PLATE DESCRIBING PURPOSE) POWER POLE/TEL DATA INCANDESCENT LAMP DIMMER FLUORESCENT LAMP DIMMER LOW VOLTAGE LAMP DIMMER THERMOSTAT, OUTLET, WALL MOUNTED, +48" (T) (LOCATE SYMMETRICALLY WITH OTHER DEVICES) $\oplus$ ELECTRIC HEATER, WALL MOUNTED, WITH DISCONNECT ELECTRIC HEATER IN EQUIPMENT PER SUBSCRIPT **WWW** (C-C=CRANK CASE, A-D=AIR DUCT, W-H=WATER HTR) SWITCH, FLUSH IN WALL, TOGGLE, SINGLE-POLE S.T. +42" (SUBSCRIPT DENOTES UNIT CONTROLLED) SWITCH, FLUSH IN WALL, TOGGLE, TWO-POLE S.T. +42" SWITCH, FLUSH IN WALL, THREE WAY +42" $\sim 3$ (CONNECT TO MATCHING SWITCH FOR 3-WAY USE) — D — SWITCH, FLUSH IN WALL, FOUR WAY +42" (CONNECT TO MATCHING SWITCH FOR 3-4 WAY USE) SWITCH, FLUSH IN WALL, KEY OPERATED SWITCH, FLUSH IN WALL, MOMENTARY CONTACT, S.P.S.T. SWITCH, FLUSH IN WALL, WITH PILOT LIGHT (ENGRAVE PLATE WITH ITEM CONTROLLED) ()MOTOR STARTER, WITH THERMAL OVERLOADS (POLES, NOTED, HORSEPOWER RATED) BY-PASS SWITCH (1) OR (1)(CEC APPROVED/CERTIFIED - FOR LIGHTING BY-PASS) WALL MTD. OCCUPANCY SENSOR WATTSTOPPER OR EQUAL @ +42" AFF SUBSCRIPT 'ab' INDICATES BI-LEVEL SWITCHING (300 SQ. FT) CEILING MTD. CORRIDOR OCCUPANCY SENSOR WATTSTOPPER (50 L.F.) (CEC APPROVED/CERTIFIED) CEILING MTD. OPEN OFFICE OCCUPANCY SENSOR WATTSTOPPER AMPERE (900-2100 SQ. FT.) (CEC APPROVED/CERTIFIED) AMPERE-HOUR HEAVY DUTY SWITCHPACK LIGHTOMATIC. PROVIDE ONE PER ABOVE FINISHED FLOOR CIRCUIT CONTROLLED ABOVE FINISHED GRADE MANUAL MOTOR-STARTER, MAGNETIC, THERMAL OVERLOADS, 3-P CONDUIT ONLY (PROVIDE AUXILIARY CONTACTS & CONTROL TRANSFORMER) DISTRIBUTION PANEL STOP-START PUSH-BUTTON WITH PILOT LIGHT FXISTING EXHAUST FAN DISCONNECT SWITCH, MANUAL EXO, H.P. RATED END OF LINE RESISTOR ("F" MEANS FUSED TO AMPERE RATING MARKED) END OF LINE WHERE INDICATED IN THE PLAN WITH FUSE, IT SHALL BE WITH REJECTION TYPE FUSE HOLDERS. **EMERGENCY** FIRE ALARM WATER HEATER FOOT CANDLE FULL CUT OFF MULTI-OUTLET ASSEMBLY • • • • **FLUORESCENT** FLUOR

FAN, CEILING OR WALL MOUNTED

SMOKE DUCT DETECTOR

(SUPPORT FROM REINFORCED BRACKET PLATE)

(CONFIRM INTERRUPTING CAPACITY NEEDED)

OUTLET FOR MOTOR; CONFIRM DIRECTION OF ROTATION

CIRCUIT BREAKER OF POLES, VOLTS, TRIP-AMPS NOTED

(PROVIDE FLEXIBLE CONNECTION TO J-BOX FROM MOTOR)

# MOUNTING HEIGHTS IN SYMBOL LIST APPLY UNLESS OTHERWISE NOTED ON DRAWINGS. E2.0 GENERAL DESCRIPTION DISCONNECT DEVICE, LOAD-BREAK, NON-AUTOMATIC (LABEL AS MANUAL SWITCH ONLY) DISCONNECT SWITCH & FUSE, DIAGRAMMATIC SOLENOID VALVE IN PIPELINE (CONFIRM COIL VOLTAGE & LOCATION) CONDUIT STUB-UP WITH COUPLING FLUSH IN FLOOR (TO PERMIT FUTURE REMOVAL) CONDUIT RUN EXPOSED. ALIGN WITH STRUCTURE (ATTACH TO SUPPORTS NOT TO EXCEED 5FT. APART) CONDUIT CONCEALED IN OR UNDER FLOOR: OR UNDERGROUND (CONFIRM DEPTH; GRADE TO DRAIN INTO PULL BOXES) 3/4" CONDUIT WITH 2#12 WIRES ALL WIRING TO BE MIN. 3/4" CONDUIT WITH 3#12 WIRES CU. THWN INSULATION 3/4" CONDUIT WITH 4#12 WIRES CONCEALED IN WALL 3/4" CONDUIT WITH 5#12 WIRES OR CEILING 3/4" CONDUIT WITH 6#12 WIRES NUMBER INDICATES GAUGE OF WIRE IN CODE SIZED CONDUIT. CONDUIT-ONLY WITH #12 TW COPPER PULL-WIRE (3/4" MINIMUM SIZE, UNLESS NOTED OTHERWISE) HOMERUN TO CIRCUITS #1 & #3 IN PANEL "A" (CROSSMARKS INDICATE NUMBER OF WIRES) CONDUIT DROPPING DOWN FROM RUN (IF CONDUIT IS USED KEEP COVER ACCESSIBLE) CONDUIT RISING UP FROM RUN (IF CONDUIT IS USED, KEEP COVER ACCESSIBLE) GROUNDING ELECTRODE SYSTEM. PULL BOX WITH SCREW HELD METAL COVER PLATE (DIMENSIONS CODE-SIZED UNLESS NOTED) BRANCH PANELBOARD, WALL MOUNTED, SEE SCHEDULE RECESSED MOUNTED BRANCH CIRCUIT PANELBOARD DISTRIBUTION SUB-SWITCHBOARD, SEE SCHEDULE MAIN SWITCHBOARD, POWER OR LIGHT, FLOOR STANDING, ENCLOSURE (SEE ONE LINE DIAGRAM & LOAD SUMMARY) PULL SECTION FOR UNDERGROUND SERVICE TO SWITCHBOARD (PROVIDE PERFORATED SCREW HEADS FOR UTILITY SEAL) CONTROL PANEL WITH DEVICES SHOWN OR DESCRIBED (MOUNT DEVICES INDEPENDENT FROM HINGED COVER) 3/4"C.O. FOR TELEPHONE SYSTEM. 3/4" C.O. FOR DATA OUTLET CONDUIT FOR FIRE ALARM SYSTEM UNDER FLOOR DUCT WITH OUTLETS, ACCESSORIES & J-BOX SURFACE MOUNTED BATTERY POWERED EMERGENCY BACK-UP LIGHTING CEILING MOUNTED BATTERY POWERED EMERGENCY BACK-UP LIGHTING POWER PACK REFERENCE NOTE FOR LIGHT FIXTURE TYPE NUMBERED NOTE FOR ALL ELECTRICAL DRAWINGS DETAIL DESIGNATION FOR ITEM & DRAWING NUMBER

**ABBREVIATIONS** 

NEC

TEL

TSC

TSP

TYP

WT

GROUND FAULT PROTECTION

"LONG CONTINUOUS LOAD"

MOMENTARY CONTACT ACTION

MINIMUM CIRCUIT AMPACITY

(TO BOTTOM OF FIXTURE)

"HAND OFF AUTOMATIC"

HORSEPOWER RATING

INCANDESCENT

JUNCTION BOX

KILO AMPERES.

KILOWATT

LUGS ONLY

LOW VOLTAGE

METAL HALIDE

MOUNTING HEIGHT

MOCP MAXIMUM OVER-CURRENT PROTECTION

LIGHTING

KILO-VOLT AMPS

LARGEST MOTOR

GROUND

GFP

LCL

LTG

MCA

NEW

NOT IN CONTRACT

NIGHT LIGHT

POLE, PHASE

REMOVE

NOT TO SCALE

PANEL BOARD

SATIN ALUMINUM

SHORT CIRCUIT

TELEPHONE

VOLTS

WITH

XFMR TRANSFORMER

(+)X'-Y"MOUNTING HEIGHT

WIREMOLD

VOLTAGE DROP

PHOTO ELECTRIC CELL

SATIN STAINLESS STEEL

TIME SWITCH CONTROL

TWISTED SHIELDED PAIR

UNLESS OTHERWISE NOTED

WEATHERPROOF CONSTRUCTION

WEATHER TIGHT CONSTRUCTION

WHITE BAKED ENAMEL

(XR) EXISTING TO BE RELOCATED

(X) 2-1/8" DEEP

(TO CENTER OF DEVICE)

METAL BOX 4-11/16" SQUARE

WHITE PORCELAIN ENAMEL

TWIST-LOCK CONSTRUCTION

NATIONAL ELECTRICAL CODE

# SHEET INDEX SYMBOLS & NOTES POWER PLAN, PANEL SCHEDULE & PARTIAL SINGLE LINE DIAGRAM LIGHTING PLAN & FIXTURE SCHEDULE ELECTRICAL CONSTRUCTION SPECIFICATION TITLE 24-INDOOR LIGHTING CALCULATIONS TITLE 24-INDOOR LIGHTING CALCULATIONS TITLE 24-INDOOR LIGHTING CALCULATIONS

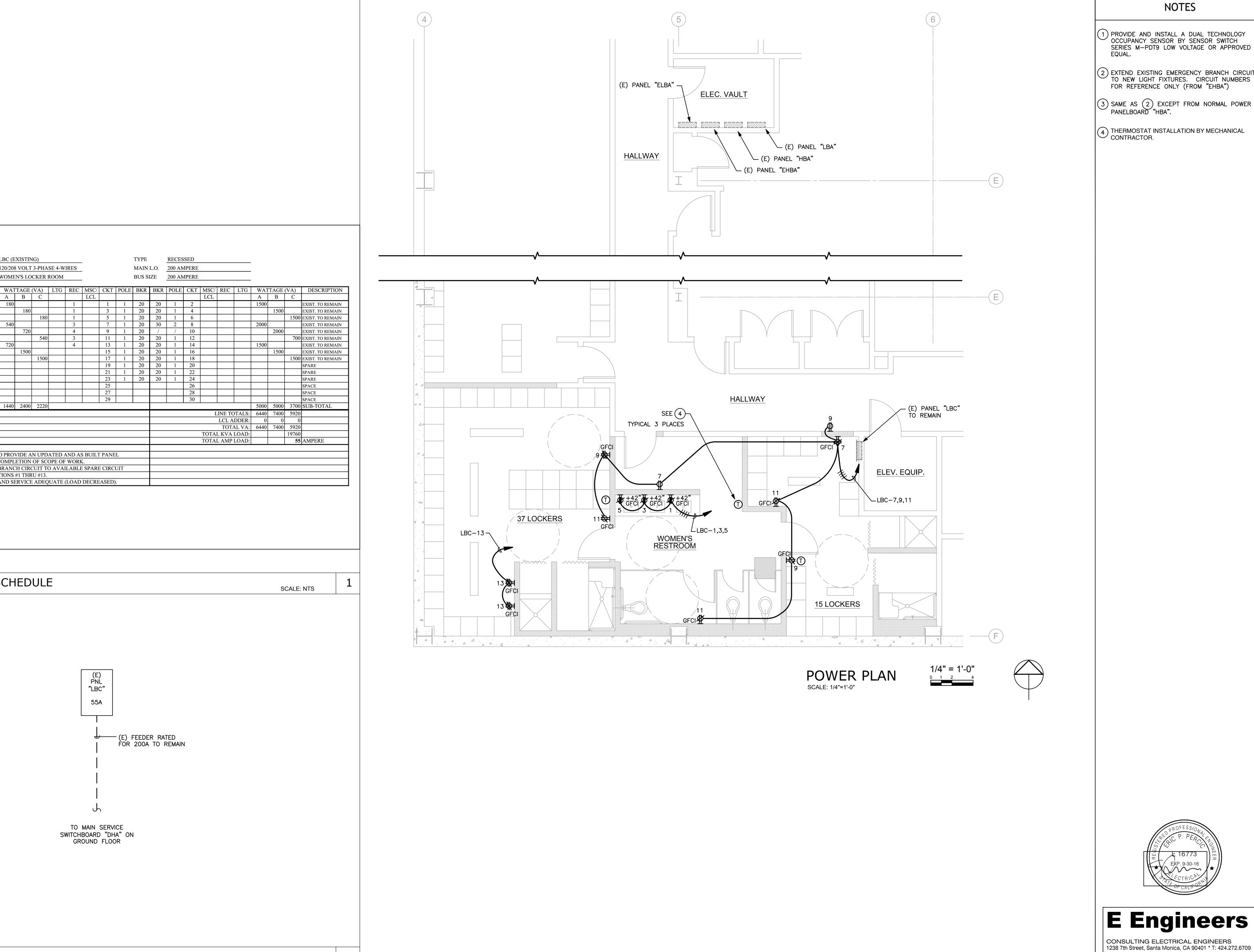


Copyright 2004 05.DEC.2014 Drawn Checked Scale AS NOTED



**E Engineers** CONSULTING ELECTRICAL ENGINEERS

1238 7th Street, Santa Monica, CA 90401 \* T: 424.272.6709



**PANEL** 

VOLTAGE

LOCATION

N) LOCKER OUTLETS

SPACE SUB-TOTAL 1440 2400

(N) LOCK OUT 2

LBC (EXISTING)

120/208 VOLT 3-PHASE 4-WIRES

1) CONTRACTOR TO PROVIDE AN UPDATED AND AS BUILT PANEL

) CONNECT NEW BRANCH CIRCUIT TO AVAILABLE SPARE CIRCUIT

(E) PNL "LBC"

55A

TO MAIN SERVICE SWITCHBOARD "DHA" ON GROUND FLOOR

PARTIAL SINGLE LINE DIAGRAM

— (E) FEEDER RATED FOR 200A TO REMAIN

SCALE: NTS

3) PANEL FEEDER AND SERVICE ADEQUATE (LOAD DECREASED).

SCHEDULE UPON COMPLETION OF SCOPE OF WORK.

BREAKER AT POSITIONS #1 THRU #13.

PANEL SCHEDULE

WOMEN'S LOCKER ROOM

TYPE

1) PROVIDE AND INSTALL A DUAL TECHNOLOGY OCCUPANCY SENSOR BY SENSOR SWITCH SERIES M-PDT9 LOW VOLTAGE OR APPROVED

2 EXTEND EXISTING EMERGENCY BRANCH CIRCUIT TO NEW LIGHT FIXTURES. CIRCUIT NUMBERS FOR REFERENCE ONLY (FROM "EHBA")

3 SAME AS 2 EXCEPT FROM NORMAL POWER PANELBOARD "HBA".

THERMOSTAT INSTALLATION BY MECHANICAL CONTRACTOR.

SLD **PARTIAL** DEPARTMENT
OOM RENOVATION  $\mathfrak{A}$ SCHEDULE

**PANEL** 

ź

PLAI

POWER

POLICE A / LOCKER RO TORRANCE F
WOMEN'S RESTROOM

Issue for Plan Check 09.Dec.14

05.DEC.2014 Drawn Checked Scale AS NOTED

E2.0

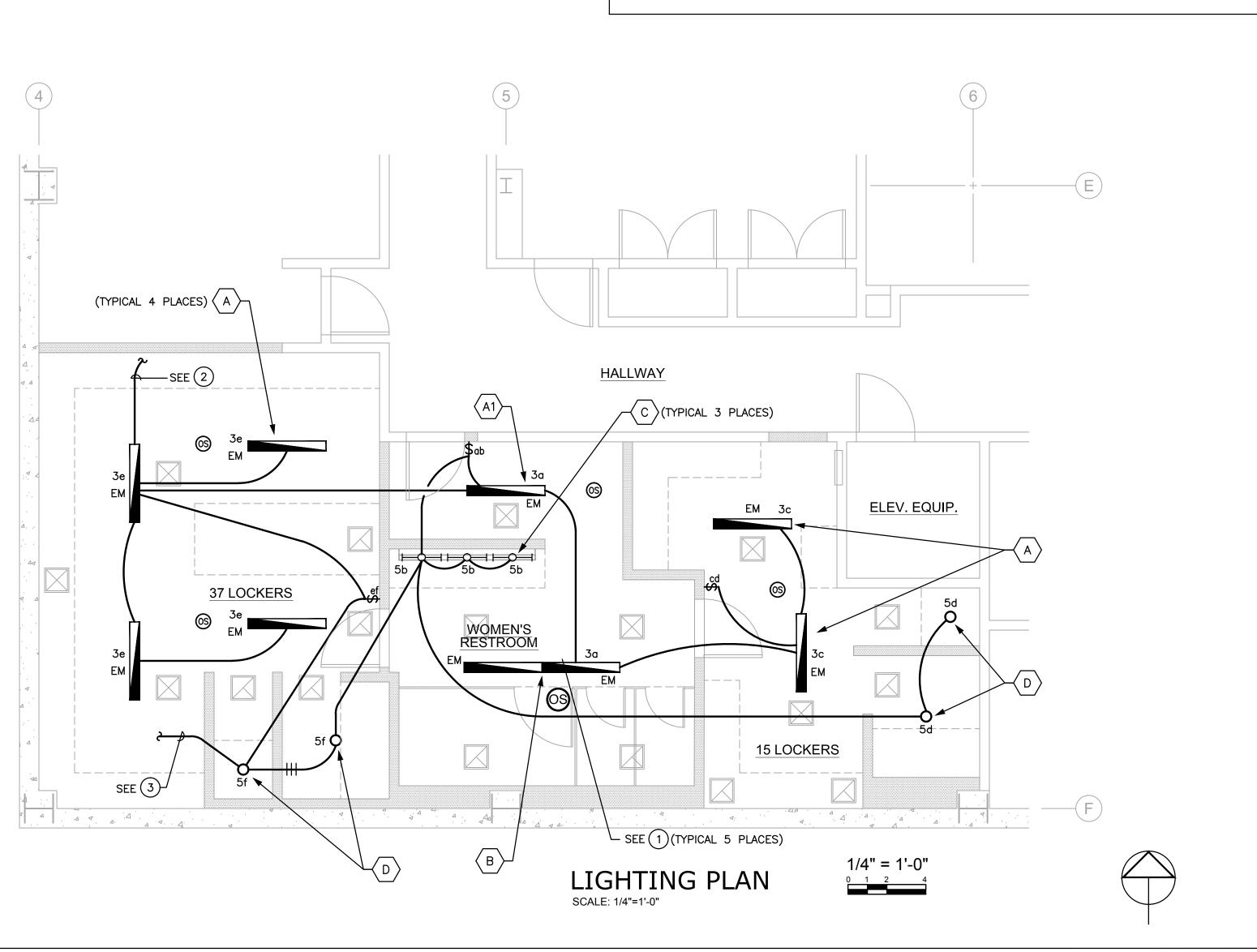
# LIGHTING LUMINAIRE SCHEDULE

TYPE (Watts)	TYPICAL LOCATION	MOUNTING METHOD	MANUFACTURER and CATALOG NUMBER	LAMPS	DESCRIPTION
Α	WOMEN'S	RECESSED	PINNACLE	(2)	4' BY 5"WIDE LINEAR HARD
(70)	LOCKER		ARCHITECTURAL	F32-T8	LID CEILINIG LUMINAIRE
	ROOM		LIGHTING	277V	WITH FLUSH SATINE LENS
			EDGE EVOLUTION	3000°K	AND ELECTRONIC BALLAST.
			#EV6A-2T8-4-XX-277-		MOUNTING AND FINISH PER
			1C-XX		ARCHITECT.
A1	WOMEN'S	RECESSED	PINNACLE	(1)	SAME AS TYPE A EXCEPT 1
(35)	RESTROOM		ARCHITECTURAL	F32-T8	LAMP.
			LIGHTING	277V	
			EDGE EVOLUTION	3000°K	
			#EV6A-1T8-4-XX-277-		
			1C-XX		
В	WOMEN'S	RECESSED	PINNACLE	(2)	8' BY 5"WIDE LINEAR HARD
(70)	RESTROOM		ARCHITECTURAL	F32-T8	LID CEILINIG LUMINAIRE
			LIGHTING	277V	WITH FLUSH SATINE LENS
			EDGE EVOLUTION	3000°K	AND ELECTRONIC BALLAST.
			#EV6SA-2T8-8-XX-277-		MOUNTING AND FINISH PER
			1C-XX		ARCHITECT.
С	WOMEN'S	SURFACE	PHILIPS LIGHTING	(1)	28" LINEAR VANITY LIGHT
(30)	RESTROOM		ALKCO	14W-T5	WITH ELECTRONIC BALLAST.
			#TAB114-XXX-277-X-X	277V	STYLE, FINISH AND LENS
				3000°K	OPTIONS PER ARCHITECT.
				(4)	
D (2.5)	WOMEN'S	RECESSED	COOPER LIGHTING	(1)	6" DIAMETER FRESNEL LENS
(35)	LOCKER		PORTFOLIO	26W PL	DOWNLIGHT WITH
	ROOM		#CD6126-E-XX-XX-4G	277V	ELECTRONIC BALLAST UL
				3000°K	LISTED FOR WET LOCATION.
					FINISH AND TRIM PER
		1			ARCHITECT.

# **LIGHTING LUMINAIRE REFERENCE NOTES:**

- 1. CERTAIN FIXTURES DESIGNATED BY 'em' ON THE FLOOR PLANS ARE CIRCUITED TO AN EMERGENCY PANELBOARD. THE EMERGENCY EGRESS ILLUMINATION SHALL BE SUPPLIED FROM AN EXISTING ONSITE GENERATOR. SEE CIRCUITING SHOWN ON LIGHTING PLANS FOR THE WIRING REQUIREMENTS. SEE LUMINAIRE SCHEDULE ABOVE AND DETERMINE BALLAST REQUIREMENTS.
- REFER TO ARCHITECTURAL CEILING PLANS FOR EXACT LOCATION OF ALL LIGHT LUMINAIRES.
   CONTRACTOR TO VERIFY MOUNTING METHOD PRIOR TO ORDERING ALL LIGHT LUMINAIRES.
- 3. CONTRACTOR TO VERIFY MOUNTING METHOD PRIOR TO ORDERING ALL LIGHT LUMINALE
- 4. CONFIRM LAMP TEMPERATURE FOR ALL LUMINAIRES WITH ARCHITECT PRIOR TO ORDER.

PAGE 1 of 1



# NOTES

1) PROVIDE AND INSTALL A DUAL TECHNOLOGY OCCUPANCY SENSOR BY SENSOR SWITCH SERIES M-PDT9 LOW VOLTAGE OR APPROVED EQUAL.

2 EXTEND EXISTING EMERGENCY BRANCH CIRCUIT TO NEW LIGHT FIXTURES. CIRCUIT NUMBERS FOR REFERENCE ONLY (FROM "EHBA")

3 SAME AS 2 EXCEPT FROM NORMAL POWER PANELBOARD "HBA".

4 MAKE ALL LINE VOLTAGE CONNECTIONS TO NEW MECHANICAL SYSTEM COMPONENTS AND PROVIDE CONDUIT ONLY FOR LOW VOLTAGE CONNECTIONS. SEE MECHANICAL WIRING DIAGRAMS FOR INFORMATION.

3 oceanfront walkenice, california

723 ocear venice, c 9 0 2

DEPARTMENT
OOM RENOVATION

SCHEDULE

FIXTURE

LIGHTING PI

ANCE POLICE DEPAR
RESTROOM / LOCKER ROOM RENOVA
RANCE BOULEVARD

TORRANCI
WOMEN'S RESTRO
3300 TORRANCE B
TORRANCE, CALIF

Issue for Plan Check 09.Dec.14

ABOVE DRAWINGS AND SPECIFICATIONS AND IDEAS, DESIGNS AND NGEMENTS REPRESENTED THEREBY ARE AND SHALL REMAIN THE RETY OF THE ARCHITECT, AND NO PART THEREOF SHALL BE COPIED, LOSED TO OTHERS OR USED IN CONNECTION WITH ANY WORK OR PRETY AND THE SPECIFIC PROJECT FOR WHICH THEY HAVE BEEN PREPAR DEVELOPED WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT. VICT WITH THESE DRAWINGS OR SPECIFICATIONS SHALL CONSTITUT. LUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

TEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE O'ED DIMENSIONS. CONTRACTORS SHALL VERIFY AND BE RESPONSIBL

Date 05.DEC.2014

Drawn BBA

Checked EP

Scale AS NOTED

E Engineers

CONSULTING ELECTRICAL ENGINEERS
1238 7th Street, Santa Monica, CA 90401 \* T: 424.272.6709

E3.0

# **ELECTRICAL CONSTRUCTION SPECIFICATIONS**

## 1.00 SCOPE

- FURNISH ALL LABOR AND FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT FOR A COMPLETE AND OPERATING ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREINAFTER.
- REMOVE ABANDONED CONNECTORS, CABLE, RECEPTACLES, TELEPHONE OUTLETS AND ALL OUTLET BOXES, CONDUIT AND WIRE THROUGHOUT THE ENTIRE AREA.
- FURNISH, INSTALL AND CONNECT CONTROL CABLE AND CONNECTORS AS NOTED ON DRAWINGS.
- INSTALL AND CONNECT ALL OWNER FURNISHED EQUIPMENT AS NOTED. COORDINATE WITH OWNER BEFORE INSTALLATION.

# 1.01 GENERAL

- A. PROVIDE ALL EQUIPMENT, MATERIAL, LABOR. SERVICE, HOISTING, SUPPORT AND SUPERVISION FOR ALL WORK SHOWN ON THE ELECTRICAL DRAWINGS AND AS SPECIFIED.
- THE ENTIRE WORK PROVIDED SHALL BE CONSTRUCTED AND FINISHED IN EVERY RESPECT IN A WORKMANLIKE AND SUBSTANTIAL MANNER. FURNISH AND INSTALL ALL WORK AS MAY BE NECESSARY TO COMPLETE THE SYSTEMS IN ACCORDANCE WITH THE BEST TRADE PRACTICE AND TO THE SATISFACTION OF THE OWNER. THE ENTIRE INSTALLATION SHALL BE READY IN EVERY RESPECT FOR SATISFACTORY AND EFFICIENT OPERATION WHEN COMPLETE.
- THE DRAWINGS SHOW VARIOUS CONDUIT AND WIRING SYSTEMS SCHEMATICALLY AND PROVIDE CIRCUIT NUMBERS FOR REFERENCE ONLY. BALANCE ALL PANELBOARDS AND RECORD ALL CIRCUIT NUMBERS ON AS-BUILT DRAWINGS.
- SUBMIT A SINGLE GUARANTEE STATING THAT ALL PORTIONS OF THE WORK ARE IN ACCORDANCE WITH CONTRACT REQUIREMENTS. GUARANTEE ALL WORK AGAINST FAULTY AND IMPROPER MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY THE OWNER EXCEPT THAT WHERE GUARANTEES OR WARRANTIES FOR LONGER TERMS ARE SPECIFIED BY CONTRACT, SUCH LONGER TERM SHALL APPLY. AT NO ADDITIONAL COST TO THE OWNER, WITHIN 24HOURS AFTER NOTIFICATION, CORRECT ANY DEFICIENCIES WHICH OCCUR DURING THE GUARANTEE PERIOD. ALL TO THE SATISFACTION OF THE OWNER.
- PROVIDE ALL MATERIAL AND EQUIPMENT AND MAKE THE FINAL CONNECTIONS TO ALL EQUIPMENT.

# 1.02 CODES AND PERMITS

- ALL WORK SHALL BE DONE IN FULL COMPLIANCE WITH THE NATIONAL ELECTRIC CODE AND ALL LOCAL CODES OR ORDINANCES HAVING JURISDICTION.
- ALL EQUIPMENT AND MATERIALS SHALL BE NEW EXCEPT WHERE SPECIFICALLY NOTED TO BE REUSED AND LISTED BY THE UNDERWRITER'S LABORATORIES, INC., MANUFACTURED IN ACCORDANCE WITH ASME, NEMA ANSI OR IEEE STANDARDS, AND APPROVED BY ALL AUTHORITIES HAVING JURISDICTION.
- SECURE AND PAY FOR ALL NECESSARY APPROVALS, PERMITS, INSPECTIONS, ETC., AND DELIVER THE OFFICIAL RECORDS OF THE GRANTING OF PERMITS TO THE OWNER WITHOUT ADDITIONAL COST TO THE OWNER.

# 1.03 COORDINATION

- COORDINATE THE WORK OF THIS SECTION WITH THE WORK OF OTHER SECTIONS IN AMPLE TIME FOR THE PROPER INSTALLATION AND CONNECTION AND FOR THE PROVISION OF ALL OPENINGS REQUIRED IN FLOORS AND WALLS.
- CAREFULLY CHECK SPACE REQUIREMENTS WITH OTHER TRADES TO INSURE THAT ALL EQUIPMENT AND MATERIALS CAN BE INSTALLED IN THE SPACES ALLOTTED THERETO. INSTALL ALL WORK TO AVOID OBSTRUCTIONS AND TO PRESERVE HEADROOM AND CEILING HEIGHT REQUIREMENTS.
- C. CAREFULLY CHECK THE DOCUMENTS WITH OTHER TRADES TO ASCERTAIN THE REQUIREMENTS OF ANY MATERIALS OR EQUIPMENT BEING FURNISHED AND/OR INSTALLED BY THAT SECTION AND PROVIDE THE PROPER INSTALLATION AND/OR CONNECTIONS INCLUDING ANY CONTROL WIRING REQUIRED.
- BEFORE FABRICATION AND INSTALLATION OF SPECIAL SYSTEM OUTLETS VERIFY THE FINAL DESIRED LOCATION OF EQUIPMENT WITH OWNER.

# 1.04 CLEANING PREMISES

A. THE CONTRACTOR SHALL KEEP ALL PARTS OF THE BUILDING AND SITE FREE FROM ANY ACCUMULATIONS OF RUBBISH OR WASTE MATERIALS CAUSED BY HIS WORKMEN, AND SHALL REMOVE SUCH ACCUMULATIONS FROM THE BUILDING, SITE AND PROPERTY. JOB SITE SHALL BE CLEANED AT THE END OF EACH WORKING DAY.

### 1.05 RECORD DRAWINGS

KEEP UP TO DATE, A COMPLETE SET OF AS BUILT MYLARS TO INDICATE ANY CHANGES FROM THE ORIGINAL DRAWINGS. UPON COMPLETION OF THE INSTALLATION, FURNISH A COMPLETE SET OF AS-BUILT MYLARS. THESE DRAWINGS SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL. AFTER APPROVAL THEY SHALL BECOME THE PROPERTY OF THE OWNER. FINAL PAYMENT WILL BE WITHHELD UNTIL RECEIPT OF THE APPROVED DRAWINGS.

### 1.06 PROTECTION & SAFEGUARDS

THE CONTRACTOR SHALL ERECT AND MAINTAIN SUITABLE BARRIERS, PROTECTIVE DEVICES, LIGHTS AND WARNING SIGNS WHERE REQUIRED FOR THE PROTECTION OF THE PUBLIC AND EMPLOYEES ABOUT THE BUILDING. HE SHALL BE FULLY RESPONSIBLE FOR ANY LOSS OR INJURY TO PERSONS OR PROPERTY RESULTING FROM HIS NEGLECT OF THESE PRECAUTIONS, HIS OWN CARELESSNESS, OR THE CARELESSNESS OR NEGLECT OF HIS EMPLOYEES, OR HIS SUB-CONTRACTOR AND/OR THEIR EMPLOYEES.

### 1.07 SHOP DRAWINGS

WITHIN THIRTY (30) DAYS AFTER AWARD OF THE GENERAL CONTRACT, THE CONTRACTOR SHALL SUBMIT SIX (6) PRINTS OF ALL REQUIRED SHOP DRAWINGS AND BROCHURES. SHOP DRAWINGS AND BROCHURES WILL BE REQUIRED FOR THE FOLLOWING EQUIPMENT. SWITCHBOARDS, PANELBOARDS, CIRCUIT BREAKERS, LIGHT FIXTURES AND ANY SPECIAL EQUIPMENT. EQUIPMENT INSTALLED WITHOUT APPROVAL THEREOF SHALL BE DONE AT THE RISK OF THE CONTRACTOR AND THE COST FOR REMOVAL OF SUCH EQUIPMENT OR RELATED WORK WHICH IS JUDGED UNSATISFACTORY FOR ANY REASON SHALL BE AT THE EXPENSE OF THIS CONTRACTOR.

### EXISTING CONDITIONS

- BEFORE SUBMITTING BID BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS AT THE BUILDING AND OF THE PRESENT INSTALLATIONS TO WHICH CONNECTIONS MUST BE MADE OR WHICH MUST BE CHANGED OR ALTERED THE INTENT OF THE WORK IS SHOWN ON THE DRAWINGS AND DESCRIBED HEREINAFTER AND NO CONSIDERATION WILL BE GRANTED BY REASON OF LACK OF FAMILIARITY ON THE PART OF THE CONTRACTOR WITH ACTUAL PHYSICAL CONDITIONS AT THE SITE.
- WHERE SPECIFICALLY CALLED FOR ON THE DRAWING OR WHEN PERMISSION IS SPECIFICALLY GIVEN BY THE OWNER, EXISTING EQUIPMENT AND MATERIAL MAY BE REUSED. SALVAGEABLE MATERIAL. UNLESS OTHERWISE INSTRUCTED BY HE OWNER. SHALL BECOME THE PROPERTY OF THE ONTRACTOR AND BE REMOVED FROM THE SITE.

# 1.09 CUTTING & PATCHING

A. THE CONTRACTOR SHALL DO ALL DRILLING, CUTTING, AND PATCHING OF GENERAL CONSTRUCTION WORK EXISTING OR NEW. ROUGH FINISH AND TRIM WHICH MAY BE REQUIRED FOR THE INSTALLATION OF ALL OF HIS WORK. ALL PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP AND FINISH AS THE ORIGINAL WORK, AND SHALL ACCURATELY MATCH ALL SURROUNDING WORK.

# 1.10 ELECTRICAL SERVICE

FURNISH AND INSTALL ALL ELECTRICAL SERVICE CONDUIT, CONDUCTORS, PULL BOXES, METER SOCKETS AND SERVICE SWITCHGEAR. SERVICE FACILITIES AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF THE UTILITY COMPANY IMMEDIATELY UPON AWARD OF CONTRACT, CONTACT THE UTILITY COMPANY TO COORDINATE THEIR WORK WITH THE WORK OF THIS CONTRACT. OBTAIN APPROVAL OF THE UTILITY COMPANY FOR SERVICE EQUIPMENT AND CONNECTIONS. ALL SERVICE AND CABLE CHARGES OF THE UTILITY COMPANY WILL BE PAID BY THE CONTRACTOR.

# 1.11 GROUNDING SYSTEM

- ALL ELECTRICAL EQUIPMENT AND SYSTEMS SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND TITLE 24, CALIFORNIA ADMINISTRATIVE CODE, PART 3. SERVICE ENTRANCE EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE UTILITY COMPANY'S REQUIREMENTS.
- GROUNDING SHALL BE AS INDICATED ON THE DRAWINGS AND BONDED TO THE COLD WATER PIPING SYSTEM.
- PROVIDE A GROUNDING CONDUCTOR, WHICH SHALL BE IN ADDITION TO THE THE CIRCUIT CONDUCTORS INDICATED, IN EACH NONMETALLIC CONDUIT USED FOR LIGHTING AND POWER CIRCUITS.
- ALL SYSTEM GROUNDING CONDUCTORS SHALL BE COPPER. ALL GROUND CONNECTIONS SHALL BE ACCESSIBLE AND MADE WITH COPPER ALLOY FITTINGS.

# 1.12 DISTRIBUTION SYSTEM

FURNISH AND INSTALL THE ELECTRICAL DISTRIBUTION SYSTEM COMPLETE INCLUDING FEEDERS, BRANCH CIRCUITS, SWITHCBOARDS, PANELBOARDS, OUTLETS AND WIRING DEVICES.

### 1.13 PANELBOARDS

LIGHTING PANELBOARDS SHALL BE WESTINGHOUSE TYPE WES 120/208V-3 PHASE AND 480/277V OR EQUAL BY SQUARE D, CUTLER HAMMER, GENERAL ELECTRIC OR SYLVANIA. THE CIRCUIT BREAKERS SHALL BE BOLT ON TYPE AND SHALL HAVE THE NUMBER OF POLES INDICATED ON THE DRAWINGS. TIE HANDLES WILL NOT BE ALLOWED. PROVIDE AN ENGRAVED PHENOLIC NAMEPLATE FOR ALL PANELS.

### 1.14 WIRING DEVICES

- THE CATALOG NUMBERS OF ALL WIRING DEVICES, UNLESS OTHERWISE SPECIFIED ARE THOSE OF THE HUBBELL COMPANY, OR AS NOTED TO ESTABLISH THE QUALITY DESIRED. EQUAL EQUIPMENT BY GENERAL ELECTRIC, BRYANT, SIERRA, SLATER, LEVITON OR A&H WILL BE ACCEPTABLE.
- FURNISH AND INSTALL WALL SWITCHES AT EACH LOCATION INDICATED ON THE DRAWINGS. WHERE MORE THAN ONE SWITCH OCCURS AT THE SAME LOCATION, THEY SHALL BE INSTALLED UNDER A MULTIPLE GANG PLATE. SWITCH HANDLE SHALL BE WHITE COLOR. SWITCHES HANDLES SHALL BE WHITE COLOR. SWITCHES SHALL BE A.C. QUIET TYPE RATED 20 AMPERES AT 120 AND/OR 277 VOLTS. HUBBELL #1221.
- FURNISH AND INSTALL CONVENIENCE RECEPTACLE AT EACH LOCATION INDICATED ON THE DRAWINGS. RECEPTACLE SHALL
- PLATES FOR WIRING DEVICES SHALL BE WHITE OR AS SELECTED BY ARCHITECT.

JUNCTION BOXES SHALL BE 4 BY 4 BY 2-1/8 INCHES DEEP WITH COVERS UNLESS OTHERWISE NOTED OR REQUIRED BY CODE. JUNCTION BOXES ABOVE SUSPENDED CEILINGS FOR LIGHTING AND FOR DATA/COMMUNICATION SYSTEMS SHALL BE 4-11/16 BY 2-1/8 INCHES DEEP MINIMUM, TO BE INSTALLED ADJACENT TO RECESSED FIXTURE IN SUCH MANNER AS TO BE ACCESSIBLE THROUGH THE OPENING IN THE CEILING IN WHICH THE FIXTURE IS INSTALLED.

# 1.16 LIGHTING FIXTURES

- FURNISH AND INSTALL UNDERWRITERS LABORATORIES, INC. LISTED LIGHTING FIXTURES AS INDICATED ON DRAWINGS.
- ALL FIXTURES SHALL BE FURNISHED COMPLETE WITH LAMPS.
- THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL FIXTURE SUPPORTS FOR ALL FIXTURES.
- ALL INCANDESCENT LAMPS SHALL BE INSIDE FROSTED. FLUORESCENT LAMPS SHALL BE STANDARD WARM WHITE (EXCEPT WHERE COLOR SHOWN OTHERWISE): WESTINGHOUSE OR SYLVANIA. INCANDESCENT AND FLUORESCENT LAMPS SHALL BE AS SPECIFIED ABOVE UNLESS OTHERWISE NOTED.
- ALL FLUORESCENT FIXTURE BALLASTS SHALL BE CLASS "P". CAL ENERGY LISTED HIGH POWER FACTOR AND C.B.M. APPROVED. BALLASTS SHALL BE THE QUIETEST TYPE AVAILABLE FOR THE APPLICATION, AND THE CONTRACTOR SHALL REPLACE ALL UNUSUALLY LOUD BALLASTS.

# 1.17 CONDUIT, EMT AND FITTINGS

- RACEWAYS LARGER THAN 3-INCH SHALL BE GALVANIZED RIGID STEEL UNLESS OTHERWISE SPECIFIED.
- RIGID METAL RACEWAYS SHALL BE INSTALLED IN WET LOCATIONS, IN OR UNDER CONCRETE SLABS ON GRADE WITH OR WITHOUT VAPOR BARRIER. IN CONCRETE WALLS AND COLUMNS, IN CONCRETE SLABS, WALLS AND COLUMNS EXPOSED TO THE WEATHER WITH OR WITHOUT VAPOR BARRIERS; WHERE EXPOSED IN AREAS OPEN TO THE WEATHER, WHERE EXPOSED ON WALLS AND COLUMNS UP 6 FEET ABOVE THE FLOOR, EXCEPT IN ELECTRICAL OR TELEPHONE RISER CLOSETS; AND IN MECHANICAL ROOMS IN SIZES LARGER THAN 1-IN UP TO 7-FEET O INCHES ABOVE FINISHED FLOOR.
- ELECTRICAL METALLIC TUBING IN SIZES UP TO 3-INCH MAY BE INSTALLED IN INTERIOR SPACES WHERE RIGID RACEWAY IS NOT REQUIRED, AND WHERE PERMITTED BY THE LOCAL CODE AUTHORITIES HAVING JURISDICTION.
- JOIN ELECTRICAL METALLIC TUBING WITH WATERTIGHT STEEL COMPRESSION TYPE THREADLESS FITTINGS THROUGHOUT. USE CONNECTORS OF FACTORY PRE INSULATED TYPE IN ALL SIZES. EMT FITTINGS USING SET SCREWS ARE NOT ACCEPTABLE. EMT CONNECTIONS SHALL BE OF MALLEABLE IRON OR STEEL.
- FLEXIBLE RACEWAY SHALL BE STEEL AND SHALL BE USED FOR REMOVABLE LIGHTING FIXTURES IN FURRED CEILING SPACES AND AT LOCATIONS AS SHOWN. USE FACTORY PRE INSULATED FITTINGS OF THE TYPE APPROVED AS GROUNDING CONNECTORS. PROVIDE GROUNDING WIRE IN ALL NON-LIQUID TIGHT FLEXIBLE RACEWAY SIZED ACCORDING TO CODE. MAXIMUM LENGTH OF FLEXIBLE RACEWAYS SHALL BE 6-FEET.
- SURFACE RACEWAY SHALL BE WIREMOLD #AL3100. PROVIDE DIVIDER WHERE SHOWN FOR COMBINATION POWER & DATA/COMM.

### 1.18 CONDUCTORS

- INSULATION.
- CONDUCTORS SHALL BE CONTINUOUS FROM OVER-CURRENT JOINTS SHALL BE MADE EXCEPT IN PULL, JUNCTION OR OUTLET BOXES.
- JOINTS IN WIRES SMALLER THAN NO.6 SHALL BE MADE WITH IDEAL SUPER WIRE NUTS OR SCOTCH TYPE "R", "Y" OR "B" SPRING CONNECTORS. JOINTS IN WIRES NO. 6 AND LARGER SHALL BE MADE WITH APPROVED SOLDERLESS CONNECTORS. ALL JOINTS IN CABLES NO. 6 AND LARGER SHALL BE INSULATED AND TAPED.
- NEUTRAL CONDUCTORS SHALL NOT BE BROKEN AT ANY DUPLEX RECEPTACLE, LIGHTING FIXTURE OR SIMILAR WIRING DEVICE IN MULTI-WIRE (3 WIRE OR 4 WIRE) CIRCUITS, GROUNDED NEUTRAL SHALL NOT DEPEND ON DEVICE CONNECTIONS FOR CONTINUITY. NEUTRAL WIRES CAN BE SPLICED TOGETHER WITH PIGTAIL TO NEUTRAL TERMINAL ON RECEPTACLE. LIGHTING FIXTURE OR SIMILAR DEVICE. IF DEVICE OR FIXTURE IS REMOVED, NEUTRAL WILL REMAIN CONTINUOUS.

MAKE CONNECTIONS TO ALL MOTORS, MOTOR CONTROLLERS AND ELECTRICALLY OPERATED EQUIPMENT WHETHER FURNISHED AS A PART OF THIS CONTRACT OR FURNISHED BY THE OWNER FOR INSTALLATION UNDER THIS CONTRACT. FURNISH AND INSTALL ALL CONDUITS AND CONDUCTORS REQUIRED FOR THESE CONNECTIONS AND FOR CONTROL WIRING AS INDICATED BY ELECTRICAL IN OTHER SECTIONS.

### 1.20 DISCONNECT SWITCHES AND CONTROL WIRING

- SWITCHES FOR ALL MOTORS, CONTROL CIRCUITS AND OTHER ELECTRICAL EQUIPMENT AS REQUIRED BY CODE WHETHER OR NOT SHOWN ON THE DRAWINGS. A DISCONNECT SWITCH SHALL BE LOCATED WITHIN SIGHT FROM THE CONTROLLER DISCONNECT LOCATION. WHERE A MOTOR IS NOT WITHIN SIGHT FROM THE CONTROLLER DISCONNECT LOCATION AN ADDITIONAL DISCONNECTING SWITCH SHALL BE PROVIDED WITHIN SIGHT OF THE MOTOR LOCATION.
- MECHANICAL CONTRACTOR FOR ITEMS, DEVICES OR EQUIPMENT THAT THE ELECTRICAL CONTRACTOR IS TO FURNISH, INSTALL AND/OR CONNECT FOR THE HEATING, VENTILATING, AIR CONDITIONING AND PLUMBING SYSTEM DEVICES UNDER THIS CONTRACT.

# 1.21 TELEPHONE FACILITIES

REQUIREMENTS OF THE TELEPHONE COMPANY. IMMEDIATELY UPON AWARD OF CONTRACT, CONTACT THE TELEPHONE COMPANY TO COORDINATE THEIR WORK AND THE WORK OF FURNISHED AND INSTALLED BY THE TELEPHONE COMPANY

- ALL CONDUCTORS SHALL BE COPPER WITH THHN 90 DEGREE C
- PROTECTIVE DEVICE TO TERMINAL OR FARTHEST OUTLET. NO

### 1.19 EQUIPMENT CONNECTIONS

- FURNISH AND INSTALL HORSE POWER RATED DISCONNECT
- THE ELECTRICAL CONTRACTOR SHALL VERIFY WITH THE

TELEPHONE CONDUIT AND FACILITIES SHALL CONFORM TO THE THIS CONTRACT. TELEPHONE CABLES AND EQUIPMENT WILL BE

**€** 16773

**E** Engineers CONSULTING ELECTRICAL ENGINEERS 1238 7th Street, Santa Monica, CA 90401 \* T: 424.272.6709

LITE Sunfront californ 2 9

6 kg 6

\_ ∂ 0 9 Δ\_ RRA EN'S RE

2

Ш

NOL

O

0

Issue for Plan Check 09.Dec.14

Copyright 2004

Date 05.DEC.2014 BBA Drawn Checked Scale

Job. No.

14-127

	ANCE		,		
					·
Project Name: TORRAN	ICE PD LOCKER	ROOM		Date Prepared:	NOVEMBER 10, 2014
Climate Zone:	ALE (Revised 06/14)  CALIFORNIA ENERGY COMMISS OF COMPLIANCE  TORRANCE PD LOCKER ROOM  Conditioned Floor Area: 907 SFT.  Unconditioned Flo				
Climate Zone: 6					
General Information		<u> </u>			
Building Type:	N	Nonresidential	High-Rise Residential		Hotel/Motel
☐ Schools		Relocatable Public Schools	Conditioned Spaces		Unconditioned Spaces
Phase of Construction:		New Construction	Addition		Alteration
Method of Compliance:		Complete Building	Area Category		Tailored
CALIFORNIA ENERGY COMM  CERTIFICATE OF COMPLIANCE  Indoor Lighting  Project Name: TORRANCE PD LOCKER ROOM  Climate Zone: 6  Conditioned Floor Area: 907 SFT. Unconditioned Floor Area: 907 SFT. Unconditioned Floor Area: 907 SFT.  Unconditioned Floo					
INDOOR LIGHTING CECNTIFICATE OF COMPLIANCE CERTIFICATE OF COMPLIANCE Indoor Lighting Project Name: TORRANCE PD LOCKER ROOM Date Prepared: NOVEMBER 10, 2014  Climate Zone: 6 Conditioned Floor Area: 907 SFT. Unconditioned Floor					
LIGHTING COMPLIANCE DE	OCUMENTS (select	yes for each document included)			
LIGHTING COMPLIANCE DO	OCUMENTS (select			J	
For detailed instructions or	the use of this and	all Energy Efficiency Standards comp	pliance documents, refer to the Nonresia	tentiai Manuai publi	snea by the California Energy Comr
	i		ollance documents, refer to the Nonresia	ientiai Manuai publi	snea by the California Energy Comm

		NRCC-LIT-05-E Line Voltage Track Ligh	ting W	orksheets 			
Sum	mary of Allowed Lig	hting Power					
Condi	itioned and Uncondition	ed space Lighting must not be combin	ed for	compliance			
	Indoor	Lighting Power for Conditioned Space	s		Indoor Lighting Power for Uncondition	ed Spa	ces
				Watts			Watts
1.		Installed Lighting NRCC-LTI-01-E, page 4	+	632	Installed Lighting NRCC-LTI-01-E, page 4	+	
2.		PORTABLE ONLY FOR OFFICES NRCC-LTI-01-E, page 3	+	0			
3.		Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	0	Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	
4.		Adjusted Installed Lighting Power (row 1 plus row 2 minus row 3)	=	632	Adjusted Installed Lighting Power (row 1 minus row 3)	=	

NRCC-LIT-02-E Lighting Controls, Certificate of Compliance, and PAF Calculation. All Pages required on plans for all submittals.

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

June 2014

CERTIFIC	ATE OF CON	1PLIANCE			NRCC-LTI-0
Indoor Li	ghting			; 	(Page 2 o
Project Nar	ne: TORI	RANCE PD LOCKER ROOM		Date Prepared: NOVEMBE	R 10, 2014
5.		Complies ONLY if Installed ≤ Allowed	<b>‡</b>	Complies ONLY	rif Installed ≤ Allowed
6.		Allowed Lighting Power Conditioned NRCC-LTI-03-E, page 1 676		Niowed Lighting Power RCC-LTI-03-E, page 1	
	ion of Requi	ired Installation Certificates — Declare by selecting yes for all Installation C	ertificates that wi	ll be submitted. (Retain copie	s and verify forms are
YES	NO	Form/Title			
V		NRCI-LTI-01-E - Must be submitted for all buildings			☐ Field Inspector
	<b>V</b>	NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an to be recognized for compliance.	n Energy Managen	nent Control System (EMCS),	☐ Field Inspector
	<b>V</b>	NRCI-LTI-03-E - Must be submitted for a line-voltage track lighting integral overcurrent protection panel used to energize only line-voltage track light	-		☐ Field Inspector
	<b>V</b>	NRCI-LTI-04-E - Must be submitted for two interlocked systems serving a conference room, a multipurpose room, or a theater to be recognized for		nvention center, a	☐ Field Inspector
	<b>V</b>	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF)	to be recognized f	or compliance.	☐ Field Inspector
	<b>V</b>	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a vi compliance.	ideo conferencing	studio to be recognized for	☐ Field Inspector
	ion of Requi	ired Certificates of Acceptance — Declare by checking all of the Certificates	of Acceptance th	at will be submitted. (Retain o	copies and verify forms are
/ES	NO	Form/Title			
V		NRCA-LTI-02-A - Must be submitted for occupancy sensors and automati	c time switch con	rols.	☐ Field Inspector
	V	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.			☐ Field Inspector
	N/	NRCA-LTI-04-A - Must be submitted for demand responsive lighting conti	rols.		☐ Field Inspector
		NRCA-LTI-04-A - Must be submitted for demand responsive lighting conti	rols.		☐ Field Inspecto

STATE OF CALIFORNIA INDOOR LIGHTING CEC-NRCC-LTI-01-E (Revised 06/14)	CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 3 of 5)
Project Name: TORRANCE PD LOCKER ROOM	Date Prepared: NOVEMBER 10,2014

A spoarate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:

CONDITIONED SPACE

UNCONDITIONED SPACE

A. INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

The actual indoor lighting power listed on this page and on the next page includes all installed permanent and planned portable lighting systems.

When Complete Building Method is used for compliance, list each different type of luminaire on separate lines.

When Area Category Method or Tailored Method is used for compliance, list each different type of luminaire by each different function area on separate lines

Also include track lighting in schedule, and submit the track lighting compliance form (NRCC-LTI-05-E) when line-voltage track lighting is installed.

NRCC-LIT-03-E Indoor Lighting Power Allowance
NRCC-LIT-04-E Tailored Method Worksheets

B. Installed Portable Luminaires in Offices – Exception to Section 140.6(a)

This section shall be filled out ONLY for portable luminaires in offices (As defined in §100.1). All other planned portable luminaires shall be documented on next page of

☐ This section is used to determine if greater than 0.3 watts of portable lighting is planned for any office

Fill out a separate line for each different office. Small offices that are typical (having the same general and portable lighting) may be grouped together. This allowance

shall not be traded between offices having different lighting systems.

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

Office Portable Luminaire Schedule	Office I	Installe	d Portable I F	Luminair oot	e Watts P	er Square	Accountable Watts	Office Location		ld ctor
Α	В	С	D	E	F	G	Н	ı	J	
Complete Luminaire Description (i.e., LED, under cabinet, furniture mounted direct/indirect)	Watts per Luminaire	Number of Luminaires	Installed portable luminaire watts in this office (B x C)	Square feet of this office	Watts per square foot (D / E)	If F ≤ 0.3, enter zero; if F > 0.3, (F-0.3)	ExG	Identify Office area in which these portable luminaires are installed	Pass	Fail
							,			
							,			
Total installed portable lui	minalas watta			O 2 weeks		inat nee affine.		Enter sum total of all pages int	o NRC	<u>-</u>
i otal installed portable lui	minaire watts	s that are	greater than	U.5 Watts	per square i	oot per omice:		LTI-01-E; Page 1		

June 2014

STATE OF CALIFORNIA INDOOR LIGHTING CEC-NRCC-LTI-01-E (Revised 06/14)	CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 4 of 5)
Project Name: TORRANCE PD LOCKER ROOM	Date Prepared: NOVEMBER 10, 2014

A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:

CONDITIONED SPACE

UNCONDITIONED SPACE

	Luminaire Schedule	ire Schedule Installed Watts Location		Location	Field In	nspector 1			
Α	B	С	]	)	E	F	G		Н
			1	tage was mined		Wai			
Name or Item Tag	Complete Luminaire Description (i.e, 3 lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per Luminaire	CEC Default from NA8	According to §130.0(c)	Number Luminaires	Total installed Watts in this area (C x E)	Primary Function area in which these luminaires are installed	Pass	Fail
	SEE PAGE 4.1 FOR INFO								
		INS	TALLED W	ATTS PAG	E TÖTAL:	632	Enter sum total of all pages into NRCC-LTI-01-E; Page 2		

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

June 2014

# WILLIAIVI LOTU JOINE, ARCHITECT

723 oceanfront w venice, californic 9 0 2 9 1

TORRANCE POLICE DEPARTMENT WOMEN'S RESTROOM / LOCKER ROOM RENOVATION

Issue for Plan Check 09.Dec.14

E DRAWINGS AND SPECIFICATIONS AND IDEAS, DESIGNS AND MENTS REPRESENTED THEREBY ARE AND SHALL REMAIN THE OF THE ARCHITECT, AND NO PART THEREOF SHALL BE COPIED, DO TO OTHERS OR USED IN CONNECTION WITH ANY WORK OR PROJED OF THE ARCHITECT. WISU, WITH THE SEED PREPARED LOPED WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT. WISU, WITH THESE DRAWINGS OR SPECIFICATIONS SHALL CONSTITUTE IVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

Copyright 2004

Date05.DEC.2014DrawnBBACheckedEPScaleAS NOTEDJob. No.14-127

E Engineers

CONSULTING ELECTRICAL ENGINEERS
1238 7th Street, Santa Monica, CA 90401 \* T: 424.272.6709

E5.0

CERTIFICATE OF COMPLIANCE		NRCC-LTI-01
Indoor Lighting		(Page 4.1 of 5)
Project name: TORRANCE POLICE DEPARTMENT WOMEN'S LOCKER ROOM	Date Prepared:	11/10/2014
X CONDITIONED SPACE	•	

	<u> </u>								
C. IND	OOR LIGHTING SCHEDULE and FIELD INSPECTION ENERG	SY CHECKLIST							
	Luminaire Schedule		Insta	lled Watt	s		Location	Field In	spector
Α	В	C	[	)	E	ш	G	-	1
		Watts	How \	Vatts	Number	Total			
		Per	Deten	mined	of	Installed			
Tag	Complete Luminaire Description	Luminaire	D	130.0	Luminaire		Primary Function Area	Pass	Fail
Α	4' LINEAR TROFFER, (2) T-8 LAMPS & 1 ELECT BALLAST	62	х		6	372	LOCKER ROOM		
A1	4' LINEAR TROFFER, (1) T-8 LAMP & ELECT BALLAST	32	x		1		RESTROOM		
В	8' LINEAR TROFFER, (2) T-8 LAMPS & 1 ELECT BALLAST	62	x		1		RESTROOM		
	30" VANITY LIGHT, (1) T-5 LAMP & ELECT BALLAST	18	x		3		RESTROOM		
D	6" DIA. SHOWER LIGHT, (1) PL & ELECT BALLAST	28	x		4	112	LOCKER ROOM		
		INST	ALLED W/	ATTS PAG	BE TOTAL:	632			

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

E Engineers - October 2014

STATE OF CALIFORNIA INDOOR LIGHTING	
CEC-NRCC-LTI-01-E (Revised 06/14)	CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 5 of 5)
Project Name: TORRANCE PD LOCKER ROOM	Date Prepared: NOVEMBER 10, 2014

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
<ol> <li>I certify that this Certificate of Compliance documentation is accurate and complete.</li> </ol>	
Documentation Author Name: ERIC PERCIC, PE	Documentation Author Signature:
Company: E ENGINEERS	Signature Date: NOVEMBER 10, 2014
Address: 1238 7th STREET	CEA/ HERS Certification identification (if applicable):
City/State/Zip: SANTA MONICA, CA 90401	Phone: (424) 272-6709
DECONNEID E DEDCON'S DECLADATION STATEMENT	

I certify the following under penalty of perjury, under the laws of the State of California:

The information provided on this Certificate of Compliance is true and correct.

- 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of
- Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance
- documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the
- enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: ERIC PERCIC, PE

Company :	E ENGINEERS	Date Signed:	NOVEMBER 10, 2014
Address:	1238 7th STREET	License:	E16773
City/\$tate/Zip:	SANTA MONICA, CA 90401	Phone:	(424) 272-6709

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

June 2014

TATE OF CALIFORNIA	
NDOOR LIGHTING	- LIGHTING CONTROLS

INDOOR LIGHTING – LIGHTING CONTROLS

CEC-NRCC-LTI-02-E (Revised 06/14) NRCC-LTI-02-E CERTIFICATE OF COMPLIANCE Indoor Lighting - Lighting Controls (Page 1 of 3) Project Name: TORRANCE PD LOCKER ROOM Date Prepared: NOVEMBER 10, 2014

The NRCC-LTI-02-E shall be used to document all mandatory and prescriptive lighting controls that are applicable to the project.

Manda	atory Li	ghting Control Declaration Statements (Indicate if the measure applies by checking yes or no below.)
YES	NO	Control Requirements
<b>V</b>		Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with Section 110.9.
	V	Lighting shall be controlled by a lighting control a system or energy management control system in accordance with §110.9. An Installation Certificate shall be submitted in accordance with Section 130.4(b).
	V	One or more Track Lighting Integral Current Limiters shall be installed which have been certified to the Energy Commission in accordance with §110.9 and §130.0. Additionally, an Installation Certificate shall be submitted in accordance with Section 130.4(b).
	V	A Track Lighting Supplementary Overcurrent Protection Panel shall be installed in accordance with Section 110.9 and Section 130.0. Additionally, an Installation Certificate shall be installed in accordance with Section 130.4(b).
V		All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with Section 130.1.
		All luminaires shall be functionally controlled with manually switched ON and OFF lighting controls in accordance with Section 130.1(a).
<b>V</b>		General lighting shall be separately controlled from all other lighting systems in an area. Floor and wall display, window display, case display, ornamental, and special effects lighting shall each be separately controlled on circuits that are 20 amps or less. When track lighting is used, general, display, ornamental, and special effects lighting shall each be separately controlled; in accordance with Section 130.1(a)4.
V		The general lighting of any enclosed area 100 square feet or larger, with a connected lighting load that exceeds 0.5 watts per square foot shall meet the multi-level lighting control requirements in accordance with Section 130.1(b).
V		All installed indoor lighting shall be equipped with controls that meet the applicable Shut-OFF control requirements in Section 130.1(c).
	V	Lighting in all Daylit Zones shall be controlled in accordance with the requirements in Section 130.1(d) and daylit zones are shown on the plans.
	V	Lighting power in buildings larger than 10,000 square feet shall be capable of being automatically reduced in response to a Demand Responsive Signal in accordance with Section 130.1(e).
<b>V</b>		Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with Section 130.4.(a). The controls required to meet the Acceptance Requirements include automatic daylight controls, automatic shut-OFF controls, and demand responsive controls.

June 2014 CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

ATE OF CALIFORNIA IDOOR LIGHTING — LIGHTING CONTROLS C-NRCC-LTI-02-E (Revised 08/14)		CALIFORNIA ENERGY CO	OMMISSION	
ERTIFICATE OF COMPLIANCE			NRCC-LTI-02-E	
ndoor Lighting - Lighting Controls			(Page 2 of 3)	
Cleate Pri TORRANCE PD LOCKER ROOM Date Pri	Prepared:	NOVEMBER 10, 2014		

A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:

☑ CONDITIONED SPACES ☐ UNCONDITIONED SPACES

										PAF Cred	it Calcu	ulation <sup>2</sup>	<		_
Ligh	iting Control Schedule		(* 1			Comply or ente	_		oted)	Watts of Controlled Lighting	PAF	Control Credit (K×L)	if Acceptance Test Required	reio inapecació	Field Inspector
Α	В	С	D	E	F	G	Н	ı	J	K	L	М	N	(	Ö
Location in Building	Type/ Description of Lighting Control (i.e.: occupancy sensor, automatic time switch, dimmer, automatic daylight, etc)	# of Units	§130.1(a)	§130.0(b)	§130.1(c)	§130.1(d)	§130.1(e)	§140.6(a)2	§140.6(d)					Pass	Fall
RESTROOM	CEILING SENSOR	2	V	V	V	Е	Е	Е	E						
LOCKER ROOM	CEILING SENSOR	3	V	V	V	E	E	Е	E						
							Ļ		<u> </u>	L					
										ım of Colum					
	IF MULTIPLE PAGES ARE USED, EN	NTER SUM	TOTAL (	OF Con	trol Cre	dit for	all pag	es HEI	RE (Sum	of all Colum	n M):				
												Enter Co into NRC	ntrol Cre C-LTI-01		

1. §130.1(a) = Manual area controls; §130.0(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive; §140.6(d) = Additional lighting controls installed to earn a PAF; §140.6(d) = Prescriptive Secondary Sidelit Daylight Controls.

2. Check Table 140.6-A for correct Factor. PAFs shall not be traded between conditioned and unconditioned spaces. As a condition to earn a PAF, an installation Certificate is also required to be filled out, signed, and submitted.

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

June 2014

DEPARTMENT
OOM RENOVATION POLICE A / LOCKER RO TORRANCI WOMEN'S RESTRO

Issue for Plan Check 09.Dec.14

Date 05.DEC.2014 Drawn Checked Scale AS NOTED

**E Engineers** CONSULTING ELECTRICAL ENGINEERS 1238 7th Street, Santa Monica, CA 90401 \* T: 424.272.6709

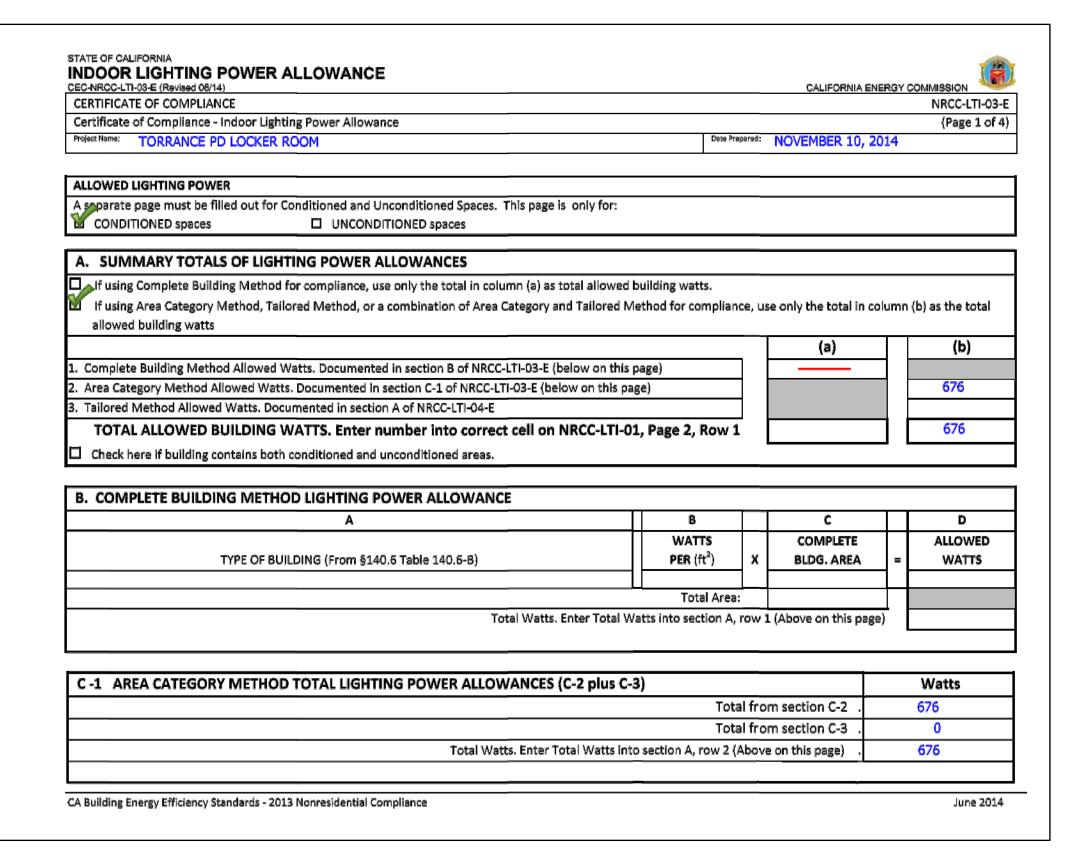
E5.1

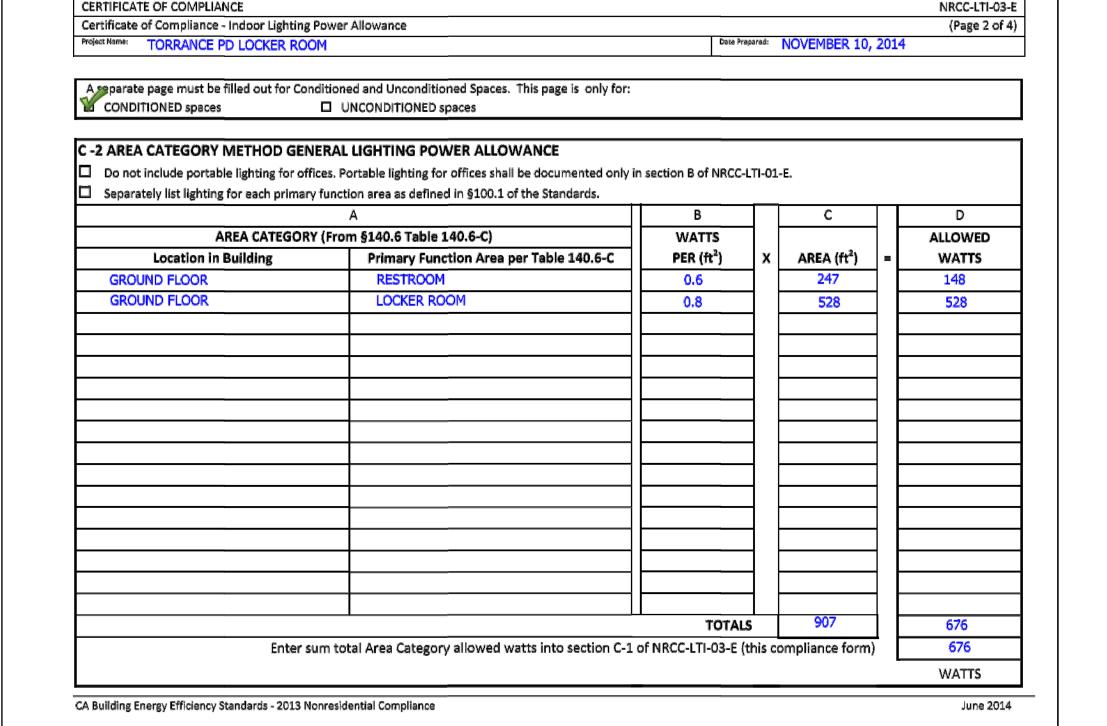
CERTIFICATE OF CON-		
CERTIFICATE OF COM		NRCC-LTI
Indoor Lighting - Ligh		(Page 3
Project Name: TORRAN	ICE PD LOCKER ROOM	Date Prepared: NOVEMBER 10, 2014
DOCUMENTATION AUT	HOR'S DECLARATION STATEMENT	
	ertificate of Compliance documentation is accurate and com	plete.
Documentation Author Name	ERIC PERCIC, PE	Documentation Author Signature:
Company:	E ENGINEERS	Signature Date: NOVEMBER 10, 2014
Address:	1238 7th STREET	CEA/ HERS Certification Identification (if applicable):
City/State/Zip:	SANTA MONICA, CA 90401	Phone: (424) 272-6709
RESPONSIBLE PERSON	S DECLARATION STATEMENT	
2. I am eligible unde		esponsibility for the building design or system design identified on this Certificate of Compliance
Compliance confo 4. The building desig documents, works 5. I will ensure that a enforcement ager	es and performance specifications, materials, components, a rm to the requirements of Title 24, Part 1 and Part 6 of the C in features or system design features identified on this Certifications submitted to the completed signed copy of this Certificate of Compliance sha	and manufactured devices for the building design or system design identified on this Certificate of alifornia Code of Regulations. icate of Compliance are consistent with the information provided on other applicable compliance are enforcement agency for approval with this building permit application. all be made available with the building permit(s) issued for the building, and made available to the ted signed copy of this Certificate of Compliance is required to be included with the documentation the Responsible Designer Signature:
<ol> <li>The energy feature Compliance confo</li> <li>The building design documents, works</li> <li>I will ensure that a enforcement ager builder provides to</li> </ol>	es and performance specifications, materials, components, a rm to the requirements of Title 24, Part 1 and Part 6 of the C in features or system design features identified on this Certificheets, calculations, plans and specifications submitted to the completed signed copy of this Certificate of Compliance sharply for all applicable inspections. I understand that a complete the building owner at occupancy.	alifornia Code of Regulations.  icate of Compliance are consistent with the information provided on other applicable compliance as enforcement agency for approval with this building permit application.  ill be made available with the building permit(s) issued for the building, and made available to the ted signed copy of this Certificate of Compliance is required to be included with the documentation the Responsible Designer Signature:
<ol> <li>The energy feature Compliance confo</li> <li>The building design documents, works</li> <li>I will ensure that a enforcement ager builder provides to Responsible Designer Name:</li> </ol>	es and performance specifications, materials, components, a rm to the requirements of Title 24, Part 1 and Part 6 of the C in features or system design features identified on this Certificheets, calculations, plans and specifications submitted to the completed signed copy of this Certificate of Compliance sharps for all applicable inspections. I understand that a complete the building owner at occupancy.  ERIC PERCIC, PE	alifornia Code of Regulations. icate of Compliance are consistent with the information provided on other applicable compliance a enforcement agency for approval with this building permit application. ill be made available with the building permit(s) issued for the building, and made available to the ted signed copy of this Certificate of Compliance is required to be included with the documentation the  Responsible Designer Signature:

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

INDOOR LIGHTING POWER ALLOWANCE

CEC-NRCC-LTI-03-E (Revised 06/14)

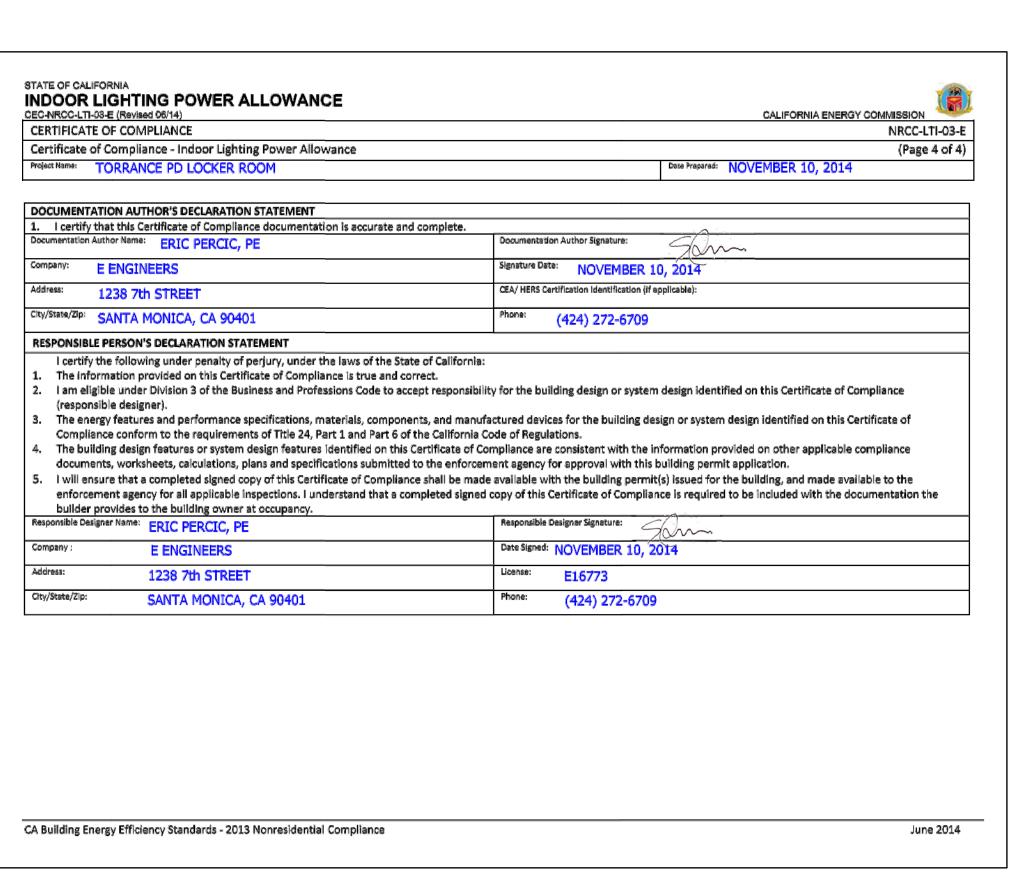


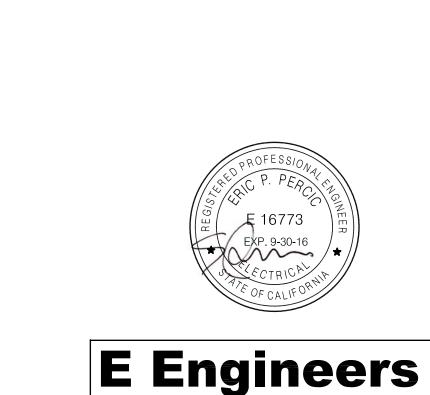


June 2014

NRCC-LTI-03-E

CALIFORNIA ENERGY COMMISSION





CONSULTING ELECTRICAL ENGINEERS

1238 7th Street, Santa Monica, CA 90401 \* T: 424.272.6709

DEPARTMENT POLICE A / LOCKER RO

TORRANCI WOMEN'S RESTRO Issue Issue for Plan Check 09.Dec.14

Copyright 2004

Date 05.DEC.2014 Drawn Checked Scale AS NOTED